

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
Escash 10	<i>Escash 10a</i>	3.38	0.07	1.28	52.46	3.28	12.77	0.14	7.25	0.02	0.38	14.19	2.81	0.00	98.02	feldspar
vitric ash	Escash10a	1.98	0.07	1.70	69.21	0.03	12.26	0.08	0.86	0.04	0.13	2.77	0.27	0.09	89.49	
n=13	Escash10b	1.97	0.00	1.38	69.89	0.03	12.50	0.04	0.83	0.05	0.11	2.80	0.18	0.10	89.89	
	Escash10c	1.94	0.07	1.48	68.94	0.02	12.04	0.15	0.86	0.04	0.13	2.93	0.34	0.08	89.01	
	Escash10d	2.09	0.00	2.02	69.36	0.02	11.77	0.07	0.84	0.04	0.13	2.79	0.20	0.06	89.40	
	Escash10e	2.09	0.00	1.86	69.16	0.03	11.82	0.08	0.85	0.04	0.13	2.73	0.23	0.01	89.04	
	Escash10f	2.07	0.00	1.79	69.23	0.02	11.60	0.07	0.83	0.05	0.06	2.82	0.19	0.03	88.76	
	<i>Escash10g</i>	1.81	0.22	1.29	67.56	0.03	11.54	0.08	0.78	0.05	0.13	2.77	0.21	0.03	86.51	low total
	<i>Escash10h</i>	2.17	0.12	1.84	65.78	0.03	10.94	0.09	0.83	0.05	0.08	2.76	0.23	0.15	85.07	low total
	Escash10i	2.01	0.00	1.83	69.38	0.02	12.16	0.09	0.85	0.04	0.11	2.85	0.22	0.12	89.69	
	Escash10j	1.97	0.00	1.49	69.59	0.02	12.21	0.06	0.90	0.05	0.10	2.83	0.21	0.15	89.58	
	Escash10k	2.07	0.00	1.45	69.55	0.04	11.98	0.05	0.88	0.06	0.11	2.69	0.24	0.00	89.12	
	Escash10l	1.91	0.00	1.96	68.87	0.02	11.79	0.06	0.84	0.06	0.09	2.79	0.23	0.00	88.63	
	<i>Escash10m</i>	2.10	0.12	1.52	71.02	0.00	12.19	0.03	0.60	0.05	0.08	2.37	0.22	0.06	90.37	Kobo'o Tuff (Silicic A)
	<i>Escash10n</i>	1.85	0.09	1.49	68.60	0.03	11.69	0.08	0.83	0.06	0.13	2.70	0.24	0.07	87.87	low total
	<i>Escash10o</i>	1.77	0.00	1.44	69.18	0.03	12.05	0.07	0.89	0.05	0.10	2.65	0.20	0.00	88.43	low total
	Escash10p	2.04	0.01	1.71	69.07	0.02	11.74	0.09	0.83	0.03	0.10	2.82	0.20	0.13	88.79	
	<i>Escash10q</i>	1.77	0.00	1.56	68.62	0.02	11.70	0.03	0.81	0.03	0.10	2.69	0.21	0.00	87.56	low total
	<i>Escash10r</i>	2.17	0.09	1.59	71.26	0.00	12.24	0.09	0.60	0.04	0.11	2.43	0.18	0.00	90.79	Kobo'o Tuff (Silicic A)
	Escash10s	1.83	0.04	1.82	69.45	0.04	11.76	0.06	0.80	0.04	0.10	2.83	0.27	0.07	89.13	
	<i>Escash10t</i>	2.01	0.04	1.46	68.83	0.02	11.47	0.15	0.81	0.05	0.12	2.81	0.21	0.13	88.12	low total
	<i>Escash10u</i>	1.89	0.00	1.53	68.46	0.03	11.74	0.04	0.85	0.04	0.14	2.72	0.19	0.00	87.63	low total
	Escash10v	1.84	0.15	1.57	68.87	0.03	12.18	0.05	0.82	0.04	0.13	2.81	0.18	0.08	88.74	
	<b>AVERAGE</b>	<b>1.99</b>	<b>0.03</b>	<b>1.70</b>	<b>69.27</b>	<b>0.03</b>	<b>11.99</b>	<b>0.07</b>	<b>0.85</b>	<b>0.04</b>	<b>0.11</b>	<b>2.81</b>	<b>0.23</b>	<b>0.07</b>	<b>89.17</b>	<b>Kobo'o Tuff(Silicic B)</b>
	<b>σ</b>	<b>0.09</b>	<b>0.05</b>	<b>0.20</b>	<b>0.30</b>	<b>0.01</b>	<b>0.26</b>	<b>0.03</b>	<b>0.03</b>	<b>0.01</b>	<b>0.02</b>	<b>0.06</b>	<b>0.04</b>	<b>0.05</b>	<b>0.40</b>	
Escash 11a	E11A-a	2.25	0.00	2.42	70.01	0.02	11.50	0.12	0.69	0.06	0.14	2.47	0.15	0.04	89.88	
vitric ash	E11A-b	2.18	0.00	2.33	70.20	0.01	11.35	0.11	0.68	0.04	0.16	2.40	0.23	0.08	89.77	
n=21	E11A-c	2.25	0.00	2.27	70.78	0.01	11.79	0.06	0.70	0.04	0.15	2.49	0.29	0.07	90.92	
	E11A-d	2.31	0.28	2.32	70.41	0.02	11.50	0.10	0.71	0.04	0.13	2.49	0.20	0.11	90.63	
	E11A-e	2.27	0.17	2.27	69.79	0.00	11.24	0.05	0.66	0.05	0.09	2.46	0.22	0.07	89.34	
	E11A-f	2.28	0.00	2.20	70.05	0.01	11.35	0.09	0.68	0.04	0.20	2.53	0.20	0.09	89.74	
	E11A-g	2.16	0.00	2.37	69.83	0.01	11.35	0.07	0.68	0.04	0.14	2.52	0.17	0.04	89.40	
	E11A-h	2.09	0.08	2.04	70.01	0.01	11.57	0.10	0.70	0.05	0.14	2.56	0.22	0.11	89.67	
	E11A-i	2.18	0.03	2.32	70.80	0.01	11.56	0.09	0.68	0.03	0.06	2.59	0.20	0.10	90.68	
	E11A-j	2.23	0.00	2.29	69.63	0.01	11.54	0.13	0.70	0.04	0.13	2.59	0.17	0.09	89.56	
	E11A-k	2.20	0.00	2.22	69.76	0.01	11.16	0.11	0.69	0.05	0.15	2.47	0.17	0.12	89.10	
	E11A-l	2.37	0.14	2.36	70.83	0.01	11.65	0.11	0.71	0.04	0.13	2.52	0.26	0.05	91.18	
	E11A-m	2.23	0.06	2.28	70.68	0.01	11.26	0.09	0.67	0.03	0.09	2.51	0.27	0.00	90.19	
	E11A-n	2.23	0.08	2.24	70.62	0.02	11.47	0.07	0.67	0.04	0.13	2.44	0.19	0.08	90.28	
	E11A-o	2.51	0.08	2.32	70.29	0.01	11.48	0.04	0.65	0.05	0.15	2.49	0.19	0.04	90.31	
	E11A-p	2.28	0.06	2.28	70.59	0.01	11.54	0.09	0.71	0.05	0.09	2.54	0.24	0.11	90.58	
	E11A-q	2.26	0.00	2.16	70.90	0.02	11.61	0.08	0.68	0.04	0.11	2.47	0.30	0.06	90.68	

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		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
	E11A-r	2.06	0.00	2.12	70.98	0.01	11.32	0.07	0.70	0.05	0.12	2.43	0.25	0.11	90.24	
	<i>E11A-s</i>	<i>0.88</i>	<i>0.00</i>	<i>0.76</i>	<i>93.90</i>	<i>0.11</i>	<i>0.94</i>	<i>0.00</i>	<i>0.34</i>	<i>0.00</i>	<i>0.03</i>	<i>0.39</i>	<i>0.00</i>	<i>0.04</i>	97.39	quartz
	E11A-t	2.46	0.00	2.23	70.30	0.00	11.63	0.09	0.67	0.04	0.17	2.61	0.21	0.08	90.50	
	E11A-u	2.23	0.00	2.24	70.00	0.01	11.47	0.08	0.69	0.04	0.13	2.53	0.22	0.01	89.66	
	E11A-v	2.12	0.00	2.19	70.14	0.01	11.66	0.09	0.69	0.04	0.14	2.56	0.21	0.12	89.97	
	<b>AVERAGE</b>	<b>2.24</b>	<b>0.05</b>	<b>2.26</b>	<b>70.32</b>	<b>0.01</b>	<b>11.48</b>	<b>0.09</b>	<b>0.69</b>	<b>0.04</b>	<b>0.13</b>	<b>2.51</b>	<b>0.22</b>	<b>0.08</b>	<b>90.11</b>	<b>Kobo'o Tuff (Silicic A)</b>
	<b>σ</b>	<b>0.11</b>	<b>0.07</b>	<b>0.09</b>	<b>0.41</b>	<b>0.01</b>	<b>0.16</b>	<b>0.02</b>	<b>0.02</b>	<b>0.01</b>	<b>0.03</b>	<b>0.05</b>	<b>0.04</b>	<b>0.03</b>	<b>0.55</b>	
Escash 11b	Escash11b-a	2.12	0.06	2.20	70.10	0.03	12.36	0.09	0.87	0.05	0.13	2.81	0.14	0.09	91.05	
vitric ash	Escash11b-b	1.99	0.09	2.23	69.16	0.03	12.52	0.11	0.81	0.05	0.10	2.68	0.17	0.00	89.93	
n=29	Escash11b-c	2.42	0.20	2.32	69.79	0.04	12.53	0.13	0.81	0.04	0.10	2.89	0.25	0.00	91.53	
	Escash11b-d	2.25	0.09	2.24	70.25	0.02	12.56	0.09	0.87	0.04	0.13	2.72	0.24	0.02	91.52	
	Escash11b-e	2.20	0.01	2.21	69.26	0.03	12.36	0.15	0.86	0.04	0.08	2.59	0.24	0.10	90.12	
	Escash11b-f	2.29	0.03	2.20	71.24	0.03	12.80	0.03	0.85	0.04	0.14	2.69	0.18	0.00	92.53	
	Escash11b-g	1.94	0.00	2.24	69.06	0.03	12.34	0.05	0.91	0.04	0.15	2.80	0.25	0.14	89.96	
	Escash11b-h	2.27	0.00	2.19	70.57	0.01	12.63	0.07	0.86	0.05	0.07	2.72	0.38	0.12	91.96	
	Escash11b-i	2.18	0.15	2.19	69.61	0.04	12.61	0.02	0.90	0.05	0.13	2.71	0.19	0.09	90.86	
	<i>Escash11b-j</i>	<i>2.47</i>	<i>0.03</i>	<i>2.30</i>	<i>69.74</i>	<i>0.04</i>	<i>12.76</i>	<i>0.05</i>	<i>0.88</i>	<i>0.04</i>	<i>0.11</i>	<i>2.04</i>	<i>0.14</i>	<i>0.00</i>	90.61	low FeO
	Escash11b-k	2.16	0.02	2.19	69.19	0.03	12.48	0.05	0.81	0.05	0.16	2.70	0.19	0.01	90.05	
	Escash11b-l	2.07	0.00	2.33	68.75	0.02	12.43	0.09	0.84	0.04	0.14	2.63	0.22	0.19	89.76	
	<i>Escash11b-l</i>	<i>2.71</i>	<i>0.11</i>	<i>1.33</i>	<i>50.74</i>	<i>3.39</i>	<i>13.24</i>	<i>0.13</i>	<i>7.26</i>	<i>0.03</i>	<i>0.36</i>	<i>13.39</i>	<i>2.94</i>	<i>0.00</i>	95.63	feldspar
	Escash11b-m	2.13	0.08	2.31	69.30	0.04	12.60	0.07	0.86	0.04	0.13	2.76	0.19	0.04	90.57	
	<i>Escash11b-n</i>	<i>0.31</i>	<i>0.00</i>	<i>2.32</i>	<i>68.90</i>	<i>0.03</i>	<i>12.35</i>	<i>0.09</i>	<i>0.86</i>	<i>0.05</i>	<i>0.13</i>	<i>2.65</i>	<i>0.27</i>	<i>0.00</i>	87.98	low total
	<i>Escash11b-o</i>	<i>2.24</i>	<i>0.00</i>	<i>2.12</i>	<i>67.80</i>	<i>0.05</i>	<i>13.05</i>	<i>0.08</i>	<i>1.14</i>	<i>0.05</i>	<i>0.14</i>	<i>3.32</i>	<i>0.31</i>	<i>0.00</i>	90.31	high CaO, FeO
	Escash11b-p	2.27	0.00	2.19	69.33	0.04	12.64	0.09	0.89	0.04	0.11	2.77	0.18	0.00	90.55	
	Escash11b-q	2.01	0.00	2.20	69.86	0.02	12.49	0.06	0.88	0.04	0.10	2.64	0.26	0.06	90.63	
	<i>Escash11b-r</i>	<i>2.08</i>	<i>0.28</i>	<i>1.31</i>	<i>51.39</i>	<i>3.38</i>	<i>13.27</i>	<i>0.12</i>	<i>6.93</i>	<i>0.02</i>	<i>0.35</i>	<i>13.20</i>	<i>2.85</i>	<i>0.00</i>	95.20	feldspar
	Escash11b-s	1.97	0.12	2.05	68.88	0.03	12.47	0.11	0.82	0.05	0.11	2.80	0.25	0.00	89.66	
	Escash11b-t	2.10	0.06	2.29	69.37	0.04	12.49	0.06	0.83	0.06	0.10	2.59	0.20	0.00	90.18	
	Escash11b-u	2.28	0.01	2.40	68.91	0.02	12.48	0.10	0.85	0.04	0.12	2.59	0.24	0.00	90.05	
	Escash11b-v	2.67	0.17	2.38	69.33	0.04	12.47	0.08	0.86	0.05	0.12	2.93	0.23	0.06	91.41	
	Escash11b-w	2.11	0.00	2.22	68.41	0.02	12.55	0.07	0.86	0.05	0.14	2.62	0.28	0.10	89.43	
	Escash11b-x	2.14	0.00	2.08	68.71	0.03	12.46	0.08	0.85	0.05	0.11	2.75	0.22	0.02	89.51	
	E11b-1	1.95	0.22	2.23	69.79	0.03	11.88	0.09	0.84	0.05	0.08	2.57	0.23	0.02	90.00	
	E11b-2	2.29	0.00	2.18	69.20	0.02	11.82	0.02	0.85	0.06	0.14	2.77	0.27	0.07	89.69	
	Esc11bmaf-r	1.07	0.17	2.08	71.81	0.04	13.29	0.17	0.93	0.04	0.15	2.80	0.24	0.14	92.91	
	Esc11bmaf-b	0.98	0.00	2.06	70.67	0.05	12.35	0.03	0.87	0.06	0.10	2.71	0.29	0.09	90.25	
	Esc11bmaf-c	0.98	0.03	2.29	69.79	0.03	12.66	0.06	0.85	0.04	0.13	2.63	0.20	0.06	89.74	
	Esc11bmaf-d	0.93	0.00	2.07	73.35	0.04	13.14	0.08	0.88	0.04	0.13	2.73	0.33	0.00	93.72	
	Esc11bmaf-k	1.09	0.00	2.17	70.59	0.03	12.33	0.07	0.85	0.05	0.11	2.77	0.27	0.07	90.41	
	Esc11bmaf-l	0.93	0.08	1.83	73.18	0.04	12.83	0.10	0.87	0.05	0.09	2.71	0.17	0.09	92.95	
	<i>Esc11bmaf-n</i>	<i>0.88</i>	<i>0.00</i>	<i>2.43</i>	<i>71.73</i>	<i>0.03</i>	<i>12.75</i>	<i>0.09</i>	<i>1.15</i>	<i>0.05</i>	<i>0.10</i>	<i>2.61</i>	<i>0.31</i>	<i>0.22</i>	92.32	high CaO
	Esc11bmaf-o	1.18	0.00	2.02	76.15	0.05	12.66	0.06	0.85	0.05	0.13	2.88	0.20	0.03	96.26	

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		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total	
	<b>AVERAGE</b>	<b>1.90</b>	<b>0.05</b>	<b>2.19</b>	<b>70.12</b>	<b>0.03</b>	<b>12.52</b>	<b>0.08</b>	<b>0.86</b>	<b>0.05</b>	<b>0.12</b>	<b>2.72</b>	<b>0.23</b>	<b>0.05</b>	<b>90.94</b>	<b>Kobo'o Tuff (Silicic B)</b>	
	<b>σ</b>	<b>0.52</b>	<b>0.07</b>	<b>0.12</b>	<b>1.67</b>	<b>0.01</b>	<b>0.29</b>	<b>0.03</b>	<b>0.03</b>	<b>0.01</b>	<b>0.02</b>	<b>0.09</b>	<b>0.05</b>	<b>0.05</b>	<b>1.53</b>		
Escash 11b vitric ash n=12	Esc11bmaf-a	2.61	0.00	1.33	51.31	3.48	12.88	0.16	7.38	0.02	0.38	13.60	3.22	0.00	96.40		
	Esc11bmaf-e	2.26	0.30	1.26	51.59	3.40	13.20	0.10	7.17	0.03	0.40	12.60	2.80	0.00	95.11		
	Esc11bmaf-f	2.37	0.08	1.34	53.23	3.30	13.22	0.15	6.75	0.02	0.34	12.13	3.03	0.00	95.95		
	Esc11bmaf-g	1.78	0.25	1.23	52.16	3.33	13.15	0.18	7.01	0.02	0.37	12.76	3.08	0.00	95.30		
	Esc11bmaf-h	1.40	0.03	1.23	53.62	3.28	12.55	0.12	6.56	0.03	0.37	12.46	2.95	0.00	94.61		
	Esc11bmaf-i	2.71	0.25	1.37	53.39	3.16	13.52	0.18	7.08	0.01	0.36	11.99	2.85	0.00	96.87		
	Esc11bmaf-j	2.56	0.05	1.14	51.26	3.37	13.12	0.11	6.94	0.02	0.41	12.44	2.84	0.00	94.23		
	Esc11bmaf-m	2.29	0.02	1.34	53.25	3.27	12.99	0.14	6.47	0.01	0.31	12.37	2.96	0.00	95.43		
	Esc11bmaf-p	2.46	0.05	1.26	51.37	3.46	13.03	0.15	7.46	0.02	0.35	13.23	2.84	0.00	95.68		
	Esc11bmaf-q	1.64	0.40	1.15	58.20	3.12	12.19	0.17	6.72	0.02	0.30	12.24	2.80	0.00	98.95		
	Esc11bmaf-s	1.32	0.10	1.23	51.80	3.34	12.99	0.11	7.02	0.02	0.38	12.59	2.86	0.00	93.78		
	Esc11bmaf-t	1.87	0.08	1.25	51.19	3.52	12.89	0.17	7.35	0.02	0.39	12.60	3.03	0.00	94.35		
	<b>AVERAGE</b>	<b>2.11</b>	<b>0.13</b>	<b>1.26</b>	<b>52.70</b>	<b>3.34</b>	<b>12.98</b>	<b>0.15</b>	<b>6.99</b>	<b>0.02</b>	<b>0.36</b>	<b>12.58</b>	<b>2.94</b>	<b>0.00</b>	<b>95.55</b>		<b>Kobo'o Tuff (Mafic)</b>
	<b>σ</b>	<b>0.48</b>	<b>0.13</b>	<b>0.07</b>	<b>1.97</b>	<b>0.12</b>	<b>0.34</b>	<b>0.03</b>	<b>0.32</b>	<b>0.01</b>	<b>0.03</b>	<b>0.45</b>	<b>0.13</b>	<b>0.00</b>	<b>1.40</b>		
Escash 13 pumice clast n=21	E13F1-1	1.54	0.09	5.05	73.33	0.02	11.28	0.01	0.44	0.03	0.07	1.57	0.19	0.06	93.68		
	E13F1-B	1.44	0.06	5.49	74.12	0.02	11.48	0.00	0.44	0.05	0.05	1.49	0.18	0.05	94.87		
	E13F1-C	2.39	0.17	6.45	74.48	0.01	11.69	0.00	0.43	0.05	0.04	1.59	0.12	0.04	97.46		
	<i>E13F1-D</i>	<i>2.47</i>	<i>0.00</i>	<i>0.65</i>	<i>50.16</i>	<i>5.28</i>	<i>13.16</i>	<i>0.01</i>	<i>10.17</i>	<i>0.00</i>	<i>0.24</i>	<i>13.01</i>	<i>2.60</i>	<i>0.05</i>	<i>97.80</i>		
	E13F1-E	1.51	0.03	5.34	74.71	0.04	11.69	0.00	0.43	0.06	0.00	1.57	0.16	0.07	95.60		
	E13F1-F	1.59	0.06	5.57	74.66	0.01	11.66	0.06	0.45	0.04	0.03	1.66	0.24	0.06	96.09		
	E13F1-G	1.83	0.00	6.25	73.49	0.02	11.49	0.03	0.47	0.04	0.06	1.41	0.13	0.06	95.29		
	E13F1-H	1.56	0.03	5.58	74.24	0.03	11.63	0.02	0.42	0.04	0.06	1.62	0.13	0.07	95.43		
	E13F1-I	1.62	0.03	4.68	69.95	0.03	10.74	0.01	0.45	0.04	0.05	1.37	0.07	0.02	89.06		
	E13F1-J	1.49	0.20	5.04	73.71	0.02	11.56	0.00	0.45	0.04	0.05	1.66	0.13	0.08	94.43		
	E13F1-K	1.68	0.17	5.80	73.96	0.02	11.55	0.06	0.41	0.04	0.00	1.72	0.12	0.03	95.57		
	E13F1-L	1.63	0.11	5.39	73.81	0.02	11.51	0.00	0.43	0.06	0.05	1.69	0.16	0.00	94.87		
	E13F1-M	1.56	0.00	5.73	73.71	0.01	11.60	0.03	0.43	0.04	0.02	1.53	0.08	0.04	94.78		
	E13F1-N	1.40	0.09	5.17	73.27	0.03	11.40	0.02	0.43	0.04	0.01	1.49	0.17	0.07	93.59		
	E13F1-O	1.51	0.20	5.27	73.79	0.02	11.42	0.02	0.42	0.04	0.03	1.63	0.18	0.04	94.58		
	E13F1-P	1.46	0.00	5.11	73.91	0.03	11.50	0.03	0.44	0.05	0.04	1.69	0.08	0.03	94.39		
	E13F1-q	1.48	0.00	5.31	73.21	0.02	11.52	0.00	0.46	0.05	0.06	1.51	0.13	0.04	93.79		
	E13F1-r	1.32	0.00	5.10	73.59	0.03	11.38	0.00	0.45	0.04	0.10	1.53	0.15	0.05	93.74		
	E13F1-s	1.47	0.17	5.02	72.84	0.03	11.26	0.00	0.45	0.04	0.03	1.68	0.07	0.08	93.15		
	E13F1-t	1.47	0.00	5.19	73.16	0.03	11.32	0.01	0.44	0.06	0.01	1.59	0.11	0.03	93.41		
	E13F1-u	1.46	0.11	4.93	72.99	0.01	11.22	0.02	0.44	0.04	0.04	1.50	0.12	0.04	92.95		
	E13F1-v	1.42	0.09	5.41	72.78	0.02	11.18	0.05	0.47	0.04	0.02	1.55	0.19	0.09	93.30		
	<b>AVERAGE</b>	<b>1.56</b>	<b>0.08</b>	<b>5.37</b>	<b>73.51</b>	<b>0.02</b>	<b>11.43</b>	<b>0.02</b>	<b>0.44</b>	<b>0.04</b>	<b>0.04</b>	<b>1.57</b>	<b>0.14</b>	<b>0.05</b>	<b>94.29</b>	<b>Ogoti Tuff</b>	
	<b>σ</b>	<b>0.22</b>	<b>0.07</b>	<b>0.42</b>	<b>0.99</b>	<b>0.01</b>	<b>0.22</b>	<b>0.02</b>	<b>0.02</b>	<b>0.01</b>	<b>0.02</b>	<b>0.09</b>	<b>0.04</b>	<b>0.02</b>	<b>1.64</b>		

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
Escash 13 pumice clast n=15	Escash13F3a	2.04	0.27	5.97	74.57	0.01	11.93	0.06	0.38	0.03	0.04	1.53	0.12	0.02	96.98	
	Escash13F3b	1.64	0.11	5.41	73.96	0.01	11.97	0.04	0.48	0.04	0.03	1.66	0.24	0.00	95.61	
	Escash13F3c	1.33	0.00	5.10	73.67	0.01	12.10	0.07	0.49	0.04	0.04	1.78	0.17	0.00	94.81	
	Escash13F3d	1.94	0.10	6.19	73.88	0.02	12.01	0.03	0.43	0.03	0.05	1.57	0.14	0.15	96.54	
	Escash13F3e	1.48	0.03	5.37	73.93	0.03	12.04	0.02	0.45	0.05	0.01	1.55	0.14	0.02	95.13	
	Escash13F3f	1.78	0.00	5.49	74.55	0.03	11.99	0.04	0.40	0.04	0.04	1.52	0.14	0.00	96.02	
	Escash13F3g	1.48	0.04	5.41	73.93	0.03	12.12	0.04	0.48	0.04	0.03	1.72	0.12	0.03	95.47	
	Escash13F3h	1.99	0.00	6.34	74.34	0.03	11.69	0.03	0.39	0.04	0.01	1.55	0.09	0.08	96.58	
	Escash13F3i	1.64	0.03	5.50	72.10	0.02	11.96	0.01	0.45	0.05	0.04	1.70	0.11	0.10	93.71	
	Escash13F3j	1.50	0.00	5.45	73.24	0.01	11.94	0.04	0.47	0.05	0.02	1.58	0.19	0.00	94.50	
	Escash13F3k	1.33	0.00	5.33	73.53	0.01	11.99	0.00	0.45	0.04	0.05	1.65	0.13	0.10	94.60	
	Escash13F3l	1.47	0.18	5.30	73.39	0.02	12.11	0.05	0.48	0.04	0.06	1.74	0.20	0.13	95.17	
	Escash13F3m	1.59	0.05	5.19	73.79	0.09	11.97	0.00	0.44	0.04	0.02	1.53	0.13	0.03	94.88	
	Escash13F3n	1.59	0.12	5.62	74.16	0.01	12.09	0.00	0.44	0.04	0.06	1.69	0.17	0.13	96.12	
	Escash13F3o	1.76	0.00	5.89	72.65	0.02	11.98	0.04	0.48	0.04	0.05	1.66	0.13	0.07	94.77	
	<b>AVERAGE</b>	<b>1.64</b>	<b>0.06</b>	<b>5.57</b>	<b>73.71</b>	<b>0.02</b>	<b>11.99</b>	<b>0.03</b>	<b>0.45</b>	<b>0.04</b>	<b>0.04</b>	<b>1.63</b>	<b>0.15</b>	<b>0.06</b>	<b>95.39</b>	<b>Ogoti Tuff</b>
	<b>σ</b>	<b>0.22</b>	<b>0.08</b>	<b>0.36</b>	<b>0.67</b>	<b>0.02</b>	<b>0.11</b>	<b>0.02</b>	<b>0.04</b>	<b>0.01</b>	<b>0.02</b>	<b>0.09</b>	<b>0.04</b>	<b>0.05</b>	<b>0.91</b>	
Escash 13 pumice clast n=18	Escash13G1a	1.97	0.12	6.26	73.73	0.01	12.12	0.03	0.45	0.05	0.05	1.60	0.16	0.03	96.58	
	Escash13G1b	2.07	0.06	6.44	73.44	0.03	12.05	0.04	0.47	0.05	0.05	1.62	0.17	0.05	96.55	
	Escash13G1c	1.97	0.05	6.27	73.45	0.02	12.01	0.03	0.45	0.05	0.00	1.59	0.16	0.07	96.11	
	Escash13G1d	1.97	0.13	5.97	73.15	0.02	12.13	0.09	0.42	0.04	0.06	1.74	0.22	0.00	95.94	
	Escash13G1e	2.26	0.21	6.37	73.60	0.02	12.04	0.03	0.46	0.04	0.03	1.54	0.10	0.03	96.74	
	Escash13G1f	1.97	0.23	6.32	73.24	0.03	12.11	0.02	0.44	0.05	0.03	1.61	0.13	0.06	96.24	
	Escash13G1g	2.23	0.15	6.31	73.30	0.03	11.96	0.05	0.46	0.04	0.04	1.68	0.15	0.09	96.49	
	Escash13G1h	2.39	0.21	6.19	73.01	0.03	12.07	0.04	0.46	0.05	0.06	1.64	0.17	0.00	96.31	
	Escash13G1i	2.22	0.00	6.35	73.53	0.04	12.02	0.02	0.46	0.05	0.03	1.56	0.12	0.00	96.42	
	Escash13G1j	2.06	0.06	6.25	71.50	0.01	11.74	0.05	0.46	0.05	0.04	1.58	0.19	0.05	94.04	
	Escash13G1k	2.39	0.29	5.90	73.26	0.03	12.13	0.06	0.45	0.04	0.09	1.68	0.14	0.00	96.45	
	Escash13G1l	2.15	0.12	6.23	73.08	0.02	11.98	0.01	0.44	0.05	0.06	1.64	0.14	0.00	95.94	
	Escash13G1m	1.89	0.05	5.98	73.84	0.02	12.10	0.01	0.46	0.04	0.06	1.81	0.07	0.00	96.34	
	Escash13G1n	2.26	0.29	6.48	73.23	0.01	12.05	0.09	0.43	0.05	0.03	1.74	0.18	0.12	96.96	
	Escash13G1o	1.69	0.00	5.65	74.01	0.02	12.07	0.08	0.49	0.04	0.06	1.61	0.13	0.00	95.84	
Escash13G1p	2.17	0.12	6.03	73.42	0.02	12.19	0.00	0.43	0.03	0.03	1.75	0.18	0.07	96.45		
Escash13G1q	1.83	0.21	6.06	73.76	0.01	12.02	0.08	0.42	0.05	0.03	1.63	0.13	0.02	96.25		
Escash13G1r	2.22	0.00	6.23	73.31	0.02	12.00	0.08	0.42	0.04	0.04	0.06	0.06	0.00	94.48	low MnO	
Escash13G1s	1.74	0.00	6.32	73.55	0.02	12.00	0.04	0.44	0.04	0.04	1.58	0.17	0.02	95.96		
	<b>AVERAGE</b>	<b>2.07</b>	<b>0.13</b>	<b>6.19</b>	<b>73.34</b>	<b>0.02</b>	<b>12.04</b>	<b>0.04</b>	<b>0.45</b>	<b>0.05</b>	<b>0.04</b>	<b>1.65</b>	<b>0.15</b>	<b>0.03</b>	<b>96.20</b>	<b>Ogoti Tuff</b>
	<b>σ</b>	<b>0.21</b>	<b>0.10</b>	<b>0.21</b>	<b>0.53</b>	<b>0.01</b>	<b>0.10</b>	<b>0.03</b>	<b>0.02</b>	<b>0.01</b>	<b>0.02</b>	<b>0.07</b>	<b>0.04</b>	<b>0.04</b>	<b>0.61</b>	
Escash 13 pumice clast n=8	E13M2-e	2.15	0.11	6.51	72.97	0.03	11.17	0.06	0.44	0.05	0.01	1.58	0.13	0.04	95.25	
	E13M2-h	2.11	0.06	6.55	73.42	0.02	11.54	0.01	0.47	0.06	0.08	1.65	0.19	0.01	96.18	
	E13M2-m	2.11	0.00	6.39	72.89	0.02	11.15	0.00	0.46	0.06	0.00	1.64	0.16	0.04	94.92	

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
	E13M2-n	1.81	0.00	6.30	72.30	0.01	11.13	0.03	0.45	0.05	0.09	1.65	0.19	0.04	94.04	
	E13M2-o	2.00	0.31	6.18	73.62	0.01	11.30	0.01	0.43	0.05	0.06	1.54	0.13	0.08	95.73	
	E13M2-p	2.06	0.06	6.35	73.86	0.02	11.35	0.06	0.42	0.05	0.04	1.93	0.16	0.06	96.40	
	E13M2-r	2.17	0.00	6.36	72.65	0.01	11.23	0.04	0.45	0.04	0.06	1.55	0.15	0.08	94.80	
	E13M2-v	2.00	0.00	6.23	73.13	0.03	11.52	0.04	0.44	0.05	0.09	1.66	0.16	0.03	95.37	
	<b>AVERAGE</b>	<b>2.05</b>	<b>0.07</b>	<b>6.36</b>	<b>73.11</b>	<b>0.02</b>	<b>11.30</b>	<b>0.03</b>	<b>0.44</b>	<b>0.05</b>	<b>0.05</b>	<b>1.65</b>	<b>0.16</b>	<b>0.05</b>	<b>95.34</b>	<b>Ogoti Tuff</b>
	<b>σ</b>	<b>0.12</b>	<b>0.11</b>	<b>0.13</b>	<b>0.51</b>	<b>0.01</b>	<b>0.16</b>	<b>0.02</b>	<b>0.02</b>	<b>0.01</b>	<b>0.03</b>	<b>0.12</b>	<b>0.02</b>	<b>0.02</b>	<b>0.77</b>	
Escash 13 pumice clast n=11	E13M2-a	2.42	0.19	0.80	50.03	5.19	13.08	0.01	9.99	0.03	0.20	12.84	2.41	0.03	97.21	
	<i>E13M2-b</i>	<i>2.61</i>	<i>0.00</i>	<i>0.07</i>	<i>48.59</i>	<i>0.19</i>	<i>31.01</i>	<i>0.00</i>	<i>15.66</i>	<i>0.07</i>	<i>0.02</i>	<i>0.74</i>	<i>0.09</i>	<i>0.06</i>	<i>99.11</i>	feldspar
	<i>E13M2-c</i>	<i>3.60</i>	<i>0.06</i>	<i>0.07</i>	<i>50.96</i>	<i>0.19</i>	<i>29.38</i>	<i>0.00</i>	<i>13.69</i>	<i>0.00</i>	<i>0.00</i>	<i>0.81</i>	<i>0.06</i>	<i>0.00</i>	<i>98.82</i>	feldspar
	E13M2-d	2.25	0.11	1.03	50.16	5.18	12.97	0.02	9.73	0.01	0.23	12.72	2.67	0.00	97.07	
	E13M2-f	2.11	0.13	0.73	49.70	4.94	12.68	0.06	9.86	0.05	0.21	12.52	2.56	0.04	95.59	
	E13M2-g	2.43	0.13	0.81	51.05	4.72	12.75	0.02	9.44	0.00	0.23	11.67	2.48	0.00	95.75	
	E13M2-i	2.23	0.05	0.86	50.38	5.10	12.97	0.05	9.86	0.01	0.28	12.92	2.64	0.03	97.39	
	E13M2-j	2.26	0.05	0.89	50.62	5.04	12.90	0.02	9.70	0.03	0.27	12.65	2.40	0.03	96.85	
	E13M2-k	1.86	0.00	0.74	51.11	5.25	13.16	0.00	9.80	0.04	0.21	12.44	2.60	0.00	97.21	
	E13M2-q	2.18	0.11	0.80	50.32	4.95	12.82	0.04	9.70	0.02	0.22	12.56	2.57	0.00	96.29	
	E13M2-s	2.48	0.00	0.79	50.67	5.06	13.06	0.03	9.76	0.01	0.24	12.48	2.40	0.01	96.99	
	<i>E13M2-t</i>	<i>0.28</i>	<i>0.00</i>	<i>0.00</i>	<i>51.57</i>	<i>17.06</i>	<i>1.94</i>	<i>0.00</i>	<i>19.10</i>	<i>0.00</i>	<i>0.25</i>	<i>7.40</i>	<i>0.59</i>	<i>0.00</i>	<i>98.18</i>	feldspar
	E13M2-u	2.57	0.03	0.70	50.80	4.95	13.12	0.02	9.76	0.02	0.28	12.08	2.54	0.01	96.89	
	E13M2-w	2.31	0.00	0.88	50.14	5.21	12.86	0.00	9.90	0.01	0.18	12.55	2.53	0.00	96.58	
		<b>AVERAGE</b>	<b>2.28</b>	<b>0.07</b>	<b>0.82</b>	<b>50.45</b>	<b>5.05</b>	<b>12.94</b>	<b>0.02</b>	<b>9.77</b>	<b>0.02</b>	<b>0.23</b>	<b>12.49</b>	<b>2.52</b>	<b>0.01</b>	<b>96.71</b>
	<b>σ</b>	<b>0.20</b>	<b>0.06</b>	<b>0.09</b>	<b>0.44</b>	<b>0.16</b>	<b>0.16</b>	<b>0.02</b>	<b>0.14</b>	<b>0.01</b>	<b>0.03</b>	<b>0.35</b>	<b>0.10</b>	<b>0.02</b>	<b>0.60</b>	
Gonn150 vitric ash n=29	Gonn150m-a	1.15	0.00	1.10	72.05	0.03	12.63	0.08	0.89	0.04	0.13	2.90	0.31	0.03	91.34	
	Gonn150m-b	0.82	0.11	1.42	71.17	0.04	12.65	0.06	0.87	0.06	0.16	2.66	0.22	0.00	90.24	
	Gonn150m-c	0.80	0.00	1.79	71.40	0.04	12.62	0.12	0.86	0.06	0.12	2.70	0.25	0.07	90.82	
	<i>Gonn150m-d</i>	<i>2.89</i>	<i>0.16</i>	<i>1.43</i>	<i>52.11</i>	<i>3.37</i>	<i>13.13</i>	<i>0.11</i>	<i>7.33</i>	<i>0.02</i>	<i>0.41</i>	<i>13.39</i>	<i>2.93</i>	<i>0.00</i>	<i>97.29</i>	feldspar
	Gonn150m-e	0.91	0.00	1.95	72.21	0.04	12.74	0.05	0.88	0.05	0.11	2.66	0.14	0.14	91.88	
	<i>Gonn150m-f</i>	<i>0.81</i>	<i>0.00</i>	<i>1.11</i>	<i>68.71</i>	<i>0.03</i>	<i>12.34</i>	<i>0.12</i>	<i>0.83</i>	<i>0.04</i>	<i>0.16</i>	<i>2.69</i>	<i>0.16</i>	<i>0.03</i>	<i>87.04</i>	low total
	Gonn150m-g	0.89	0.00	1.90	73.11	0.05	12.64	0.07	0.89	0.04	0.08	2.94	0.33	0.00	92.94	
	Gonn150m-h	0.92	0.09	1.81	70.83	0.03	12.73	0.09	0.87	0.04	0.11	2.62	0.28	0.16	90.60	
	Gonn150m-i	0.91	0.06	1.62	71.41	0.04	12.61	0.09	0.89	0.04	0.12	2.66	0.21	0.04	90.70	
	Gonn150m-j	0.73	0.01	1.69	72.86	0.04	13.12	0.13	0.89	0.06	0.13	2.71	0.19	0.00	92.54	
	Gonn150m-k	0.79	0.06	1.84	71.67	0.05	12.66	0.07	0.88	0.05	0.09	2.69	0.20	0.10	91.16	
	Gonn150m-l	0.81	0.08	0.92	70.17	0.04	13.03	0.00	0.89	0.04	0.11	2.79	0.24	0.03	89.16	
	<i>Gonn150m-m</i>	<i>0.69</i>	<i>0.08</i>	<i>1.88</i>	<i>68.37</i>	<i>0.03</i>	<i>12.17</i>	<i>0.11</i>	<i>0.85</i>	<i>0.06</i>	<i>0.10</i>	<i>2.64</i>	<i>0.23</i>	<i>0.10</i>	<i>87.31</i>	low total
	<i>Gonn150m-n</i>	<i>2.37</i>	<i>0.25</i>	<i>1.29</i>	<i>52.19</i>	<i>3.40</i>	<i>13.53</i>	<i>0.19</i>	<i>6.70</i>	<i>0.03</i>	<i>0.37</i>	<i>12.12</i>	<i>2.87</i>	<i>0.00</i>	<i>95.30</i>	feldspar
	<i>Gonn150m-o</i>	<i>0.85</i>	<i>0.07</i>	<i>1.52</i>	<i>70.25</i>	<i>0.25</i>	<i>12.14</i>	<i>0.10</i>	<i>1.03</i>	<i>0.07</i>	<i>0.17</i>	<i>3.05</i>	<i>0.14</i>	<i>0.03</i>	<i>89.68</i>	high MgO, CaO
<i>Gonn150m-p</i>	<i>0.75</i>	<i>0.06</i>	<i>0.91</i>	<i>69.51</i>	<i>0.06</i>	<i>12.40</i>	<i>0.08</i>	<i>0.93</i>	<i>0.03</i>	<i>0.11</i>	<i>2.72</i>	<i>0.22</i>	<i>0.00</i>	<i>87.77</i>	low total	
Gonn150m-q	0.91	0.10	1.63	72.57	0.05	12.92	0.05	0.90	0.04	0.16	2.77	0.17	0.09	92.36		
<i>Gonn150m-s</i>	<i>1.71</i>	<i>0.09</i>	<i>1.23</i>	<i>51.52</i>	<i>3.42</i>	<i>13.28</i>	<i>0.15</i>	<i>6.77</i>	<i>0.03</i>	<i>0.35</i>	<i>12.39</i>	<i>3.05</i>	<i>0.00</i>	<i>93.98</i>	feldspar	

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
	Gonnl50m-r	0.88	0.00	1.81	69.99	0.04	12.60	0.11	0.90	0.05	0.15	2.76	0.25	0.06	89.59	
	Gonnl50a	2.04	0.00	1.94	69.14	0.03	12.18	0.10	0.84	0.06	0.11	2.81	0.13	0.03	89.40	
	Gonnl50b	2.17	0.00	1.88	69.66	0.01	12.33	0.13	0.86	0.05	0.11	2.78	0.22	0.00	90.22	
	Gonnl50c	2.23	0.03	1.83	69.79	0.03	12.36	0.12	0.84	0.04	0.13	2.87	0.25	0.04	90.57	
	Gonnl50d	2.07	0.00	1.67	69.80	0.03	12.21	0.06	0.85	0.05	0.08	2.61	0.15	0.07	89.67	
	Gonnl50e	2.37	0.15	1.92	69.72	0.03	12.11	0.11	0.83	0.05	0.11	2.82	0.25	0.08	90.55	
	Gonnl50f	2.35	0.00	1.81	69.54	0.02	12.08	0.09	0.86	0.04	0.12	2.69	0.24	0.12	89.96	
	Gonnl50g	2.28	0.01	1.83	69.12	0.03	12.36	0.06	0.83	0.06	0.11	2.86	0.27	0.14	89.96	
	Gonnl50h	2.34	0.14	1.96	69.40	0.04	12.53	0.08	0.85	0.04	0.11	2.77	0.26	0.17	90.70	
	Gonnl50i	2.20	0.19	1.88	69.18	0.04	11.82	0.09	0.85	0.05	0.11	2.78	0.22	0.18	89.60	
	Gonnl50j	2.06	0.00	1.88	69.58	0.04	12.43	0.06	0.84	0.04	0.11	2.81	0.22	0.00	90.08	
	Gonnl50k	0.00	0.00	0.00	31.33	0.00	0.00	65.95	0.02	0.01	0.00	0.39	0.06	0.00	97.76	zircon
	Gonnl50l	2.39	0.20	1.76	69.94	0.01	12.28	0.11	0.87	0.04	0.08	2.75	0.25	0.04	90.72	
	Gonnl50m	2.36	0.19	1.86	69.02	0.03	12.59	0.03	0.82	0.04	0.13	2.89	0.27	0.00	90.23	
	Gonnl50n	2.51	0.10	1.36	70.42	0.04	12.78	0.08	0.86	0.05	0.15	2.88	0.22	0.17	91.62	
	Gonnl50o	2.12	0.06	1.76	69.15	0.04	12.27	0.11	0.83	0.04	0.14	2.76	0.21	0.03	89.53	
	Gonnl50p	2.11	0.10	1.74	69.61	0.03	12.26	0.11	0.83	0.05	0.10	2.78	0.17	0.08	89.98	
	Gonnl50q	2.28	0.04	1.38	69.97	0.02	12.49	0.06	0.84	0.06	0.12	2.74	0.17	0.04	90.22	
	Gonnl50r	2.35	0.04	1.40	71.02	0.01	11.94	0.05	0.61	0.04	0.12	2.36	0.19	0.00	90.13	Kobo'o (Silicic A)
	Gonnl50s	2.29	0.21	1.66	69.17	0.02	12.09	0.11	0.83	0.04	0.12	2.77	0.29	0.00	89.60	
	<b>AVERAGE</b>	<b>1.68</b>	<b>0.07</b>	<b>1.71</b>	<b>70.40</b>	<b>0.03</b>	<b>12.49</b>	<b>0.08</b>	<b>0.86</b>	<b>0.05</b>	<b>0.12</b>	<b>2.77</b>	<b>0.23</b>	<b>0.07</b>	<b>90.55</b>	<b>Kobo'o Tuff (Silicic B)</b>
	<b>σ</b>	<b>0.70</b>	<b>0.07</b>	<b>0.25</b>	<b>1.25</b>	<b>0.01</b>	<b>0.30</b>	<b>0.03</b>	<b>0.02</b>	<b>0.01</b>	<b>0.02</b>	<b>0.08</b>	<b>0.05</b>	<b>0.06</b>	<b>0.97</b>	
Gonnl 52	Gonnl52a	2.02	0.00	2.19	70.17	0.00	11.95	0.05	0.67	0.03	0.09	2.46	0.27	0.00	89.90	
vitric ash	Gonnl52b	1.98	0.00	2.12	70.47	0.00	12.18	0.09	0.64	0.05	0.13	2.54	0.26	0.04	90.53	
n=19	Gonnl52c	1.97	0.07	2.07	70.64	0.01	12.18	0.04	0.65	0.03	0.09	2.45	0.16	0.00	90.38	
	Gonnl52d	2.23	0.07	2.01	70.79	0.00	11.90	0.07	0.69	0.05	0.10	2.50	0.25	0.03	90.70	
	Gonnl52e	2.00	0.17	1.88	70.78	0.03	12.12	0.11	0.64	0.04	0.09	2.41	0.30	0.00	90.58	
	Gonnl52f	2.09	0.17	1.85	70.20	0.01	11.74	0.05	0.66	0.04	0.12	2.53	0.26	0.08	89.78	
	Gonnl52g	2.08	0.00	2.30	70.54	0.01	12.31	0.00	0.67	0.04	0.13	2.46	0.26	0.00	90.81	
	Gonnl52h	2.04	0.02	2.26	69.42	0.01	12.15	0.09	0.62	0.03	0.13	2.58	0.23	0.07	89.67	
	Gonnl52i	2.20	0.00	2.11	70.23	0.01	12.22	0.08	0.67	0.04	0.11	2.47	0.22	0.02	90.38	
	Gonnl52j	1.98	0.01	2.00	69.75	0.01	11.85	0.10	0.69	0.05	0.10	2.46	0.20	0.10	89.29	
	Gonnl52k	2.02	0.00	2.02	70.56	0.01	12.23	0.07	0.68	0.04	0.12	2.62	0.24	0.00	90.60	
	Gonnl52l	1.98	0.00	2.07	70.07	0.02	11.63	0.04	0.65	0.04	0.11	2.48	0.16	0.11	89.37	
	Gonnl52m	2.07	0.14	2.00	70.29	0.02	12.09	0.01	0.67	0.03	0.12	2.52	0.21	0.00	90.19	
	Gonnl52n	2.09	0.00	1.93	70.50	0.01	12.25	0.07	0.65	0.05	0.12	2.59	0.26	0.12	90.64	
	Gonnl52o	2.11	0.03	2.15	69.59	0.01	11.48	0.07	0.64	0.04	0.12	2.42	0.15	0.03	88.83	
	Gonnl52p	1.98	0.00	1.91	70.04	0.01	11.85	0.04	0.63	0.05	0.13	2.68	0.31	0.12	89.76	
	Gonnl52q	1.92	0.00	2.08	69.78	0.01	11.77	0.10	0.65	0.05	0.08	2.39	0.25	0.00	89.07	
	Gonnl52r	2.21	0.12	2.01	70.33	0.01	12.21	0.05	0.62	0.04	0.12	2.49	0.21	0.00	90.41	
	Gonnl52s	2.01	0.00	2.07	70.75	0.00	12.21	0.09	0.65	0.03	0.10	2.42	0.23	0.04	90.60	
	<b>AVERAGE</b>	<b>2.05</b>	<b>0.04</b>	<b>2.05</b>	<b>70.26</b>	<b>0.01</b>	<b>12.02</b>	<b>0.06</b>	<b>0.66</b>	<b>0.04</b>	<b>0.11</b>	<b>2.50</b>	<b>0.23</b>	<b>0.04</b>	<b>90.08</b>	<b>Kobo'o Tuff (Silicic A)</b>

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
	<b>σ</b>	<b>0.09</b>	<b>0.06</b>	<b>0.12</b>	<b>0.41</b>	<b>0.01</b>	<b>0.24</b>	<b>0.03</b>	<b>0.02</b>	<b>0.01</b>	<b>0.02</b>	<b>0.08</b>	<b>0.04</b>	<b>0.05</b>	<b>0.61</b>	
Gonnl 53	Gonnl53a	2.45	0.00	1.80	70.64	0.00	12.30	0.10	0.58	0.05	0.09	2.48	0.19	0.00	90.69	
vitric ash	Gonnl53b	2.52	0.07	1.70	70.42	0.01	12.17	0.04	0.63	0.06	0.11	2.35	0.24	0.00	90.32	
n=17	Gonnl53c	2.53	0.00	1.74	69.11	0.00	12.34	0.11	0.76	0.06	0.13	2.75	0.29	0.05	89.87	
	Gonnl53d	2.40	0.00	1.75	70.56	0.01	11.97	0.04	0.63	0.06	0.09	2.25	0.18	0.18	90.11	
	Gonnl53e	2.75	0.07	1.80	70.22	0.00	12.38	0.12	0.63	0.06	0.07	2.50	0.24	0.11	90.94	
	<i>Gonnl53f</i>	<i>9.14</i>	<i>0.00</i>	<i>1.62</i>	<i>65.40</i>	<i>0.00</i>	<i>22.45</i>	<i>0.00</i>	<i>2.45</i>	<i>0.01</i>	<i>0.00</i>	<i>0.25</i>	<i>0.01</i>	<i>0.18</i>	<i>101.51</i>	feldspar
	Gonnl53g	2.53	0.07	1.79	69.81	0.00	12.17	0.07	0.64	0.06	0.09	2.51	0.21	0.07	90.03	
	Gonnl53h	2.61	0.07	2.00	69.38	0.01	12.04	0.04	0.58	0.06	0.13	2.26	0.22	0.02	89.40	
	Gonnl53i	2.56	0.00	1.72	72.33	0.00	12.55	0.04	0.63	0.05	0.10	2.56	0.20	0.09	92.84	
	Gonnl53j	2.58	0.00	1.73	70.09	0.00	12.38	0.06	0.59	0.05	0.05	2.27	0.19	0.00	89.99	
	Gonnl53k	2.62	0.00	1.70	70.18	0.00	12.07	0.09	0.59	0.06	0.10	2.28	0.16	0.00	89.85	
	Gonnl53l	2.26	0.00	1.76	70.41	0.00	12.34	0.09	0.60	0.06	0.10	2.43	0.19	0.11	90.33	
	<i>Gonnl53m</i>	<i>2.39</i>	<i>0.26</i>	<i>1.82</i>	<i>68.97</i>	<i>0.00</i>	<i>12.00</i>	<i>0.08</i>	<i>0.36</i>	<i>0.04</i>	<i>0.09</i>	<i>2.43</i>	<i>0.23</i>	<i>0.06</i>	<i>88.74</i>	low CaO
	Gonnl53n	2.49	0.00	1.80	70.43	0.00	11.87	0.06	0.59	0.05	0.13	2.47	0.20	0.00	90.10	
	Gonnl53o	2.68	0.00	1.83	70.22	0.00	12.29	0.04	0.60	0.04	0.07	2.43	0.24	0.01	90.46	
	Gonnl53p	2.61	0.05	1.60	69.48	0.01	12.21	0.11	0.60	0.06	0.11	2.31	0.24	0.24	89.61	
	Gonnl53q	2.30	0.00	1.70	69.07	0.01	12.25	0.12	0.59	0.05	0.06	2.45	0.19	0.14	88.92	
	Gonnl53r	2.69	0.08	1.83	70.22	0.00	12.44	0.06	0.57	0.06	0.12	2.49	0.21	0.07	90.85	
	Gonnl53s	2.60	0.09	1.87	69.50	0.00	12.20	0.06	0.60	0.05	0.10	2.36	0.17	0.03	89.64	
	<b>AVERAGE</b>	<b>2.54</b>	<b>0.03</b>	<b>1.77</b>	<b>70.12</b>	<b>0.00</b>	<b>12.23</b>	<b>0.07</b>	<b>0.61</b>	<b>0.05</b>	<b>0.10</b>	<b>2.42</b>	<b>0.21</b>	<b>0.06</b>	<b>90.23</b>	Kobo'o Tuff (Silicic A)
	<b>σ</b>	<b>0.13</b>	<b>0.04</b>	<b>0.09</b>	<b>0.76</b>	<b>0.00</b>	<b>0.18</b>	<b>0.03</b>	<b>0.04</b>	<b>0.01</b>	<b>0.02</b>	<b>0.13</b>	<b>0.03</b>	<b>0.07</b>	<b>0.85</b>	
Gonnl 59	Gonnl59a	2.39	0.00	2.91	73.67	0.00	12.05	0.01	0.55	0.02	0.10	2.07	0.20	0.10	94.07	
vitric ash	Gonnl59b	2.61	0.03	2.97	72.92	0.01	11.79	0.06	0.48	0.03	0.08	1.82	0.19	0.00	92.99	
n=23	Gonnl59c	2.94	0.19	3.06	73.53	0.02	11.98	0.01	0.46	0.03	0.05	1.80	0.14	0.11	94.33	
	Gonnl59d	2.72	0.12	3.05	74.09	0.01	11.95	0.05	0.43	0.03	0.08	1.93	0.19	0.03	94.68	
	Gonnl59e	2.44	0.08	2.81	72.48	0.01	11.78	0.04	0.46	0.03	0.06	1.82	0.14	0.03	92.20	
	Gonnl59f	2.41	0.21	3.15	74.06	0.01	11.67	0.03	0.40	0.04	0.04	1.79	0.14	0.05	94.00	
	Gonnl59g	2.91	0.01	2.99	73.62	0.00	11.98	0.03	0.44	0.03	0.06	1.85	0.09	0.00	94.01	
	Gonnl59h	2.48	0.00	3.09	74.37	0.02	11.78	0.05	0.40	0.04	0.03	1.72	0.15	0.03	94.16	
	Gonnl59i	2.70	0.03	2.89	72.39	0.00	11.94	0.06	0.52	0.05	0.03	2.05	0.20	0.12	92.99	
	Gonnl59j	2.47	0.23	3.07	72.29	0.01	11.75	0.09	0.46	0.03	0.08	1.94	0.15	0.05	92.63	
	Gonnl59k	2.55	0.38	2.99	73.98	0.01	11.96	0.02	0.44	0.03	0.06	1.80	0.16	0.03	94.42	
	Gonnl59l	2.28	0.20	2.95	72.80	0.00	11.91	0.06	0.51	0.02	0.08	1.99	0.18	0.11	93.10	
	Gonnl59m	2.82	0.27	2.86	72.71	0.01	12.01	0.00	0.45	0.03	0.09	1.86	0.14	0.02	93.28	
	Gonnl59n	2.43	0.27	2.71	73.16	0.02	11.61	0.09	0.45	0.04	0.05	1.75	0.10	0.12	92.78	
	Gonnl59o	2.18	0.00	2.91	72.67	0.01	11.81	0.04	0.47	0.03	0.09	1.78	0.17	0.00	92.16	
	Gonnl59p	2.51	0.12	2.93	72.38	0.00	11.66	0.04	0.47	0.03	0.07	1.79	0.16	0.00	92.17	
	Gonnl59q	2.78	0.15	2.97	72.72	0.02	11.75	0.03	0.43	0.04	0.07	1.77	0.18	0.07	92.98	
	Gonnl59r	2.91	0.10	3.05	72.86	0.00	12.00	0.02	0.46	0.04	0.05	1.87	0.23	0.00	93.59	
	Gonnl59s	3.04	0.00	3.04	72.90	0.01	12.10	0.09	0.45	0.03	0.08	1.81	0.18	0.00	93.72	

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
	Gonnl59t	2.57	0.15	3.10	73.79	0.01	11.71	0.04	0.41	0.04	0.05	1.64	0.21	0.04	93.75	
	Gonnl59u	2.61	0.00	2.99	73.03	0.00	12.15	0.07	0.56	0.02	0.07	1.99	0.13	0.03	93.66	
	Gonnl59v	2.71	0.17	3.13	73.55	0.01	11.85	0.00	0.48	0.03	0.09	1.74	0.19	0.00	93.96	
	Gonnl59w	2.60	0.12	3.06	73.07	0.02	11.85	0.05	0.51	0.03	0.08	1.83	0.18	0.00	93.39	
	<b>AVERAGE</b>	<b>2.61</b>	<b>0.12</b>	<b>2.99</b>	<b>73.18</b>	<b>0.01</b>	<b>11.87</b>	<b>0.04</b>	<b>0.47</b>	<b>0.03</b>	<b>0.07</b>	<b>1.84</b>	<b>0.16</b>	<b>0.04</b>	<b>93.44</b>	<b>Sifi Tuff</b>
	<b>σ</b>	<b>0.22</b>	<b>0.11</b>	<b>0.11</b>	<b>0.62</b>	<b>0.01</b>	<b>0.15</b>	<b>0.03</b>	<b>0.04</b>	<b>0.01</b>	<b>0.02</b>	<b>0.11</b>	<b>0.03</b>	<b>0.04</b>	<b>0.74</b>	
Gonnl 61	Gonnl61a	2.80	0.03	3.17	74.17	0.01	12.09	0.08	0.46	0.04	0.06	1.88	0.10	0.15	95.05	
vitric ash	Gonnl61b	2.23	0.00	2.82	71.76	0.01	11.95	0.10	0.51	0.04	0.08	2.16	0.19	0.00	91.84	
n=16	Gonnl61c	2.57	0.00	3.05	74.12	0.01	11.80	0.03	0.45	0.03	0.07	1.79	0.14	0.15	94.21	
	Gonnl61d	2.43	0.02	3.01	73.08	0.02	11.74	0.04	0.43	0.04	0.11	1.80	0.16	0.02	92.92	
	<i>Gonnl61e</i>	<i>8.18</i>	<i>0.04</i>	<i>0.97</i>	<i>61.90</i>	<i>0.00</i>	<i>24.14</i>	<i>0.01</i>	<i>4.44</i>	<i>0.01</i>	<i>0.00</i>	<i>0.23</i>	<i>0.01</i>	<i>0.18</i>	<i>100.11</i>	feldspar
	<i>Gonnl61f</i>	<i>2.59</i>	<i>0.12</i>	<i>3.01</i>	<i>72.32</i>	<i>0.01</i>	<i>6.68</i>	<i>0.03</i>	<i>0.43</i>	<i>0.03</i>	<i>0.05</i>	<i>1.80</i>	<i>0.15</i>	<i>0.15</i>	<i>87.37</i>	low total
	Gonnl61g	2.48	0.18	3.02	73.12	0.02	11.79	0.03	0.45	0.03	0.05	1.78	0.23	0.00	93.18	
	<i>Gonnl61h</i>	<i>2.54</i>	<i>0.18</i>	<i>2.61</i>	<i>75.12</i>	<i>0.03</i>	<i>12.27</i>	<i>0.00</i>	<i>0.48</i>	<i>0.03</i>	<i>0.01</i>	<i>1.02</i>	<i>0.02</i>	<i>0.11</i>	<i>94.43</i>	low TiO <sub>2</sub>
	Gonnl61i	2.83	0.00	2.80	72.73	0.00	11.72	0.08	0.45	0.03	0.07	1.75	0.18	0.06	92.70	
	Gonnl61j	2.59	0.06	3.08	74.16	0.02	11.78	0.03	0.41	0.04	0.07	1.60	0.09	0.11	94.04	
	<i>Gonnl61k</i>	<i>7.50</i>	<i>0.00</i>	<i>4.64</i>	<i>66.27</i>	<i>0.01</i>	<i>21.01</i>	<i>0.03</i>	<i>0.99</i>	<i>0.01</i>	<i>0.02</i>	<i>0.24</i>	<i>0.07</i>	<i>0.62</i>	<i>101.39</i>	feldspar
	Gonnl61l	2.49	0.09	3.00	72.78	0.01	11.87	0.05	0.47	0.04	0.03	1.88	0.16	0.00	92.88	
	Gonnl61m	2.37	0.05	2.89	72.27	0.01	11.73	0.05	0.49	0.03	0.08	1.88	0.21	0.00	92.05	
	Gonnl61n	2.44	0.12	2.71	72.87	0.01	11.88	0.03	0.50	0.04	0.06	1.94	0.18	0.01	92.80	
	<i>Gonnl61o</i>	<i>2.63</i>	<i>0.06</i>	<i>2.70</i>	<i>70.65</i>	<i>0.06</i>	<i>13.51</i>	<i>0.01</i>	<i>0.93</i>	<i>0.05</i>	<i>0.10</i>	<i>2.06</i>	<i>0.09</i>	<i>0.00</i>	<i>92.86</i>	high CaO
	<i>Gonnl61p</i>	<i>2.33</i>	<i>0.00</i>	<i>2.64</i>	<i>69.37</i>	<i>0.12</i>	<i>12.83</i>	<i>0.10</i>	<i>0.84</i>	<i>0.05</i>	<i>0.08</i>	<i>2.68</i>	<i>0.30</i>	<i>0.05</i>	<i>91.39</i>	high CaO
	Gonnl61q	3.16	0.33	3.29	72.72	0.01	12.12	0.09	0.45	0.04	0.04	1.75	0.21	0.00	94.22	
	Gonnl61r	2.48	0.02	2.94	72.38	0.00	12.03	0.08	0.54	0.03	0.08	2.09	0.16	0.06	92.90	
	Gonnl61s	2.76	0.00	3.01	72.46	0.01	11.70	0.00	0.47	0.03	0.04	1.80	0.20	0.02	92.50	
	Gonnl61t	2.67	0.24	2.99	72.48	0.01	12.08	0.05	0.50	0.03	0.06	1.95	0.18	0.02	93.26	
	Gonnl61u	2.51	0.00	3.13	73.72	0.00	11.74	0.01	0.38	0.04	0.08	1.62	0.16	0.01	93.41	
	<i>Gonnl61v</i>	<i>0.23</i>	<i>0.18</i>	<i>1.72</i>	<i>93.15</i>	<i>0.01</i>	<i>1.50</i>	<i>0.01</i>	<i>0.09</i>	<i>0.01</i>	<i>0.00</i>	<i>0.09</i>	<i>2.39</i>	<i>0.00</i>	<i>99.37</i>	quartz
	Gonnl61w	2.62	0.00	2.88	73.07	0.01	12.03	0.08	0.48	0.03	0.05	1.93	0.19	0.03	93.40	
	<b>AVERAGE</b>	<b>2.59</b>	<b>0.07</b>	<b>2.99</b>	<b>72.99</b>	<b>0.01</b>	<b>11.88</b>	<b>0.05</b>	<b>0.46</b>	<b>0.04</b>	<b>0.06</b>	<b>1.85</b>	<b>0.17</b>	<b>0.04</b>	<b>93.21</b>	<b>Sifi Tuff</b>
	<b>σ</b>	<b>0.22</b>	<b>0.10</b>	<b>0.15</b>	<b>0.72</b>	<b>0.01</b>	<b>0.15</b>	<b>0.03</b>	<b>0.04</b>	<b>0.01</b>	<b>0.02</b>	<b>0.15</b>	<b>0.04</b>	<b>0.05</b>	<b>0.84</b>	
Gonnl 62	Gonnl62ph-a	7.97	0.02	1.71	63.86	0.01	23.17	0.00	4.07	0.00	0.01	0.59	0.05	0.14	101.60	
feldspar	Gonnl62ph-b	7.81	0.02	1.29	61.15	0.02	24.06	0.00	5.02	0.00	0.00	0.57	0.00	0.09	100.03	
n=20	Gonnl62ph-c	7.42	0.00	1.48	61.24	0.02	24.33	0.00	5.14	0.01	0.02	0.49	0.03	0.00	100.18	
	Gonnl62ph-d	7.74	0.05	2.32	64.23	0.01	22.34	0.00	3.30	0.00	0.02	0.59	0.03	0.21	100.85	
	Gonnl62ph-f	7.87	0.00	2.06	63.26	0.01	22.17	0.02	3.67	0.00	0.02	0.51	0.08	0.38	100.07	
	Gonnl62ph-g	7.88	0.08	2.36	66.16	0.01	22.79	0.00	3.00	0.01	0.03	0.58	0.01	0.12	103.04	
	Gonnl62ph-i	7.87	0.00	2.28	66.13	0.03	23.26	0.00	3.20	0.00	0.00	0.57	0.05	0.39	103.79	
	Gonnl62ph-j	7.68	0.05	1.29	62.61	0.03	24.35	0.03	5.20	0.01	0.00	0.51	0.07	0.03	101.86	
	Gonnl62ph-k	7.58	0.02	1.76	63.73	0.01	22.99	0.00	3.90	0.00	0.00	0.65	0.03	0.37	101.06	
	Gonnl62ph-l	7.88	0.00	2.44	65.16	0.02	22.52	0.00	3.16	0.00	0.02	0.51	0.10	0.21	102.01	



DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
	Gonnl62ph-m	7.91	0.00	1.47	64.29	0.01	23.41	0.00	4.58	0.01	0.02	0.60	0.03	0.06	102.40	
	Gonnl62ph-n	7.59	0.03	2.33	63.46	0.01	21.90	0.03	3.17	0.01	0.01	0.43	0.00	0.24	99.21	
	Gonnl62ph-p	7.31	0.06	1.12	62.71	0.02	23.90	0.01	4.85	0.02	0.00	0.53	0.05	0.10	100.66	
	Gonnl62ph-q	7.68	0.08	2.42	62.20	0.01	21.30	0.00	3.06	0.00	0.00	0.58	0.17	0.32	97.82	
	Gonnl62ph-r	8.08	0.00	1.36	62.84	0.01	24.02	0.00	4.73	0.00	0.00	0.58	0.06	0.09	101.79	
	Gonnl62ph-s	7.56	0.07	1.30	61.88	0.01	23.57	0.00	4.76	0.00	0.00	0.55	0.03	0.08	99.83	
	Gonnl62ph-t	7.71	0.02	1.42	62.87	0.02	22.42	0.00	4.31	0.02	0.02	0.53	0.05	0.20	99.59	
	Gonnl62ph-u	7.85	0.12	2.41	62.78	0.02	21.41	0.00	3.14	0.00	0.00	0.54	0.09	0.29	98.65	
	Gonnl62ph-o	6.58	0.07	1.00	58.79	0.02	23.16	0.00	5.81	0.00	0.01	0.51	0.05	0.07	96.08	
	Gonnl62ph-e	7.52	0.00	2.12	60.95	0.03	21.96	0.00	3.38	0.01	0.00	0.59	0.02	0.38	96.98	
	<b>AVERAGE</b>	<b>7.67</b>	<b>0.03</b>	<b>1.80</b>	<b>63.02</b>	<b>0.02</b>	<b>22.95</b>	<b>0.00</b>	<b>4.07</b>	<b>0.01</b>	<b>0.01</b>	<b>0.55</b>	<b>0.05</b>	<b>0.19</b>	<b>100.38</b>	<b>HMDS Tuff</b>
	<b>σ</b>	<b>0.32</b>	<b>0.04</b>	<b>0.51</b>	<b>1.77</b>	<b>0.01</b>	<b>0.93</b>	<b>0.01</b>	<b>0.88</b>	<b>0.01</b>	<b>0.01</b>	<b>0.05</b>	<b>0.04</b>	<b>0.13</b>	<b>1.97</b>	
Gonnl 64 feldspar n=17	Gonnl64ph-a	7.98	0.00	2.38	64.88	0.02	22.43	0.00	3.11	0.00	0.00	0.59	0.10	0.25	101.74	
	Gonnl64ph-b	7.60	0.13	1.38	62.04	0.03	23.91	0.02	4.76	0.00	0.01	0.58	0.05	0.20	100.69	
	Gonnl64ph-c	7.89	0.05	1.55	63.88	0.02	23.64	0.00	4.52	0.00	0.03	0.57	0.03	0.17	102.37	
	<i>Gonnl64ph-d</i>	<i>3.62</i>	<i>0.06</i>	<i>4.71</i>	<i>76.61</i>	<i>0.18</i>	<i>11.74</i>	<i>0.04</i>	<i>0.54</i>	<i>0.01</i>	<i>0.08</i>	<i>1.57</i>	<i>0.54</i>	<i>0.02</i>	99.72	high FeO, low CaO
	Gonnl64ph-e	8.21	0.00	2.30	63.65	0.00	22.98	0.00	3.50	0.00	0.00	0.54	0.03	0.22	101.43	
	Gonnl64ph-f	7.90	0.13	1.57	63.37	0.02	23.12	0.01	4.04	0.00	0.01	0.54	0.07	0.26	101.04	
	Gonnl64ph-g	8.01	0.15	2.46	65.20	0.03	21.26	0.00	3.07	0.01	0.02	0.53	0.10	0.37	101.22	
	Gonnl64ph-h	7.78	0.00	2.12	65.47	0.01	22.33	0.00	3.03	0.00	0.03	0.63	0.03	0.20	101.63	
	Gonnl64ph-i	7.30	0.00	1.86	58.00	0.03	22.98	0.01	4.60	0.01	0.03	0.67	0.10	0.25	95.85	
	Gonnl64ph-j	7.58	0.00	1.69	63.34	0.02	23.00	0.03	4.33	0.00	0.00	0.66	0.02	0.22	100.89	
	<i>Gonnl64ph-k</i>	<i>7.48</i>	<i>0.02</i>	<i>2.31</i>	<i>58.00</i>	<i>0.02</i>	<i>19.16</i>	<i>0.03</i>	<i>3.19</i>	<i>0.00</i>	<i>0.00</i>	<i>0.57</i>	<i>0.14</i>	<i>0.25</i>	91.17	low total
	Gonnl64ph-l	7.46	0.05	1.34	65.02	0.02	23.48	0.00	4.85	0.00	0.03	0.51	0.09	0.19	103.05	
	Gonnl64ph-m	8.19	0.10	1.51	62.98	0.03	24.16	0.00	4.95	0.01	0.00	0.59	0.07	0.21	102.79	
	Gonnl64ph-n	7.66	0.00	1.38	62.53	0.02	23.82	0.00	5.00	0.00	0.00	0.58	0.00	0.30	101.30	
	Gonnl64ph-o	7.96	0.00	1.62	65.54	0.02	22.83	0.02	4.13	0.01	0.01	0.55	0.05	0.07	102.82	
	Gonnl64ph-p	7.67	0.08	1.72	60.45	0.01	21.00	0.00	3.67	0.01	0.02	0.51	0.05	0.03	95.23	
	Gonnl64ph-q	7.96	0.00	2.33	64.76	0.00	22.40	0.00	3.15	0.00	0.00	0.56	0.07	0.12	101.36	
	Gonnl64ph-r	8.24	0.05	1.81	64.23	0.02	22.88	0.00	3.68	0.01	0.00	0.60	0.03	0.12	101.69	
	Gonnl64ph-s	7.93	0.00	1.30	62.85	0.03	24.08	0.00	4.93	0.00	0.00	0.64	0.02	0.18	101.96	
	<i>Gonnl64ph-t</i>	<i>8.18</i>	<i>0.01</i>	<i>1.76</i>	<i>60.50</i>	<i>0.01</i>	<i>1.83</i>	<i>0.00</i>	<i>3.82</i>	<i>0.00</i>	<i>0.00</i>	<i>0.56</i>	<i>0.00</i>	<i>0.20</i>	76.88	low total
	<b>AVERAGE</b>	<b>7.84</b>	<b>0.04</b>	<b>1.78</b>	<b>63.42</b>	<b>0.02</b>	<b>22.96</b>	<b>0.01</b>	<b>4.08</b>	<b>0.00</b>	<b>0.01</b>	<b>0.58</b>	<b>0.05</b>	<b>0.20</b>	<b>101.00</b>	
	<b>σ</b>	<b>0.27</b>	<b>0.05</b>	<b>0.39</b>	<b>1.95</b>	<b>0.01</b>	<b>0.90</b>	<b>0.01</b>	<b>0.73</b>	<b>0.00</b>	<b>0.01</b>	<b>0.05</b>	<b>0.03</b>	<b>0.08</b>	<b>2.17</b>	
Gon05 215a vitric ash n=20	Gon05215a-a	2.53	0.00	2.46	72.95	0.03	11.67	0.03	0.38	0.03	0.05	1.71	0.22	0.09	92.15	
	Gon05215a-b	2.22	0.00	2.40	74.16	0.06	12.18	0.00	0.50	0.04	0.08	1.80	0.11	0.00	93.54	
	Gon05215a-c	2.51	0.00	2.48	73.98	0.03	12.20	0.07	0.37	0.05	0.05	1.78	0.16	0.00	93.68	
	Gon05215a-d	2.38	0.00	2.39	73.47	0.06	12.39	0.07	0.47	0.04	0.06	1.71	0.15	0.16	93.35	
	Gon05215a-e	2.65	0.00	2.44	74.02	0.03	12.15	0.03	0.47	0.04	0.05	1.65	0.16	0.06	93.76	
	Gon05215a-f	2.27	0.16	2.38	73.86	0.03	12.28	0.05	0.51	0.03	0.08	1.80	0.16	0.00	93.60	

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
	Gon05215a-g	2.44	0.00	2.41	74.04	0.04	12.24	0.07	0.53	0.05	0.08	1.73	0.15	0.10	93.88	
	Gon05215a-h	2.51	0.00	2.49	74.52	0.03	12.45	0.05	0.38	0.05	0.04	1.78	0.15	0.00	94.45	
	Gon05215a-i	2.35	0.13	2.63	72.21	0.05	12.31	0.06	0.47	0.03	0.07	1.70	0.15	0.12	92.28	
	Gon05215a-j	2.48	0.13	2.43	73.67	0.02	11.96	0.01	0.38	0.04	0.06	1.82	0.10	0.06	93.15	
	Gon05215a-k	2.30	0.00	2.42	73.54	0.02	11.98	0.05	0.35	0.04	0.03	1.79	0.07	0.05	92.63	
	Gon05215a-l	2.30	0.08	2.56	74.49	0.02	12.10	0.10	0.35	0.04	0.03	1.72	0.14	0.05	93.99	
	Gon05215a-m	3.14	0.00	1.99	78.26	0.02	11.26	0.03	0.41	0.03	0.11	1.75	0.16	0.00	97.15	
	Gon05215a-n	2.57	0.19	2.46	72.48	0.02	11.88	0.03	0.36	0.06	0.05	1.66	0.14	0.16	92.04	
	Gon05215a-o	2.54	0.02	2.70	72.83	0.02	12.45	0.04	0.33	0.03	0.07	1.71	0.10	0.00	92.84	
	Gon05215a-p	2.77	0.00	2.40	73.35	0.03	11.01	0.05	0.35	0.03	0.03	1.69	0.19	0.05	91.95	
	Gon05215a-q	2.50	0.00	2.38	73.45	0.02	11.94	0.06	0.35	0.05	0.01	1.75	0.14	0.05	92.72	
	Gon05215a-r	2.69	0.00	2.52	70.30	0.00	12.24	0.09	0.33	0.04	0.05	1.72	0.09	0.08	90.14	
	Gon05215a-s	2.23	0.08	2.41	73.87	0.04	11.97	0.03	0.50	0.04	0.09	1.68	0.11	0.13	93.18	
	Gon05215a-t	2.33	0.00	2.42	73.31	0.05	12.31	0.00	0.49	0.04	0.10	1.88	0.14	0.03	93.09	
	<b>AVERAGE</b>	<b>2.48</b>	<b>0.04</b>	<b>2.44</b>	<b>73.64</b>	<b>0.03</b>	<b>12.05</b>	<b>0.05</b>	<b>0.41</b>	<b>0.04</b>	<b>0.06</b>	<b>1.74</b>	<b>0.14</b>	<b>0.06</b>	<b>93.18</b>	<b>Sifi Tuff</b>
	<b>σ</b>	<b>0.22</b>	<b>0.06</b>	<b>0.14</b>	<b>1.44</b>	<b>0.01</b>	<b>0.37</b>	<b>0.03</b>	<b>0.07</b>	<b>0.01</b>	<b>0.03</b>	<b>0.06</b>	<b>0.03</b>	<b>0.05</b>	<b>1.34</b>	
Gon05 215b	Gon05215b-a	2.29	0.10	2.20	72.39	0.01	12.30	0.07	0.35	0.05	0.09	1.71	0.13	0.00	91.70	
vitric ash	Gon05215b-b	2.27	0.00	2.39	66.46	0.01	12.51	0.03	0.32	0.04	0.03	1.69	0.14	0.05	85.92	low total
n=17	Gon05215b-c	2.58	0.00	2.64	74.96	0.06	12.06	0.02	0.51	0.04	0.10	1.86	0.17	0.10	95.08	
	Gon05215b-d	2.39	0.08	2.78	72.90	0.02	12.66	0.04	0.36	0.00	0.04	1.75	0.16	0.01	93.20	
	Gon05215b-e	2.05	0.14	2.14	72.70	0.01	12.57	0.05	0.33	0.04	0.04	1.78	0.17	0.00	92.02	
	Gon05215b-f	2.80	0.00	2.15	74.03	0.01	12.32	0.04	0.35	0.05	0.06	1.84	0.09	0.00	93.73	
	Gon05215b-g	2.15	0.00	2.40	72.58	0.02	12.09	0.06	0.33	0.04	0.07	1.72	0.12	0.03	91.62	
	Gon05215b-h	2.48	0.00	2.13	74.24	0.01	12.46	0.05	0.33	0.04	0.05	1.66	0.12	0.00	93.57	
	Gon05215b-i	2.34	0.05	2.16	71.59	0.01	12.70	0.07	0.35	0.02	0.06	1.71	0.15	0.10	91.29	
	Gon05215b-j	2.37	0.01	2.53	75.13	0.01	12.34	0.09	0.32	0.04	0.06	1.76	0.15	0.00	94.82	
	Gon05215b-k	2.37	0.00	2.50	73.56	0.03	12.83	0.02	0.38	0.04	0.04	1.67	0.16	0.00	93.59	
	Gon05215b-l	2.45	0.11	2.55	73.16	0.04	12.14	0.04	0.51	0.04	0.11	1.69	0.13	0.06	93.00	
	Gon05215b-m	2.48	0.00	2.60	72.47	0.02	12.38	0.05	0.34	0.04	0.05	1.77	0.17	0.00	92.37	
	Gon05215b-n	2.34	0.04	2.35	72.86	0.02	12.02	0.07	0.31	0.04	0.04	1.67	0.17	0.00	91.93	
	Gon05215b-o	2.56	0.00	2.43	73.06	0.02	11.92	0.05	0.36	0.03	0.06	1.62	0.14	0.00	92.24	
	Gon05215b-p	5.27	0.01	0.25	56.06	0.08	27.65	0.00	11.21	0.01	0.03	1.20	0.16	0.09	102.02	feldspar
	Gon05215b-q	2.23	0.09	2.43	72.57	0.02	12.29	0.03	0.36	0.04	0.05	1.64	0.13	0.09	91.98	
	Gon05215b-r	2.24	0.00	2.30	71.67	0.01	11.97	0.07	0.31	0.04	0.03	1.76	0.14	0.00	90.55	
	Gon05215b-s	1.92	0.13	2.37	49.08	1.63	5.76	0.03	3.62	1.16	0.04	0.83	0.44	0.00	67.00	low total
	Gon05215b-t	2.23	0.08	2.24	70.78	0.02	12.13	0.05	0.35	0.04	0.07	1.72	0.19	0.00	89.88	
	<b>AVERAGE</b>	<b>2.37</b>	<b>0.04</b>	<b>2.38</b>	<b>72.98</b>	<b>0.02</b>	<b>12.31</b>	<b>0.05</b>	<b>0.36</b>	<b>0.04</b>	<b>0.06</b>	<b>1.73</b>	<b>0.14</b>	<b>0.02</b>	<b>92.50</b>	<b>Sifi Tuff</b>
	<b>σ</b>	<b>0.18</b>	<b>0.05</b>	<b>0.20</b>	<b>1.15</b>	<b>0.01</b>	<b>0.27</b>	<b>0.02</b>	<b>0.06</b>	<b>0.01</b>	<b>0.02</b>	<b>0.07</b>	<b>0.03</b>	<b>0.04</b>	<b>1.39</b>	
Gon05 216a	Gon05216a-a	2.24	0.03	1.98	72.46	0.01	12.18	0.05	0.71	0.04	0.11	2.64	0.33	0.10	92.88	
vitric ash	Gon05216a-b	2.02	0.18	2.07	72.04	0.02	11.99	0.08	0.72	0.04	0.11	2.53	0.34	0.06	92.20	
n=9	Gon05216a-c	1.97	0.08	1.82	72.29	0.01	11.95	0.10	0.68	0.03	0.11	2.73	0.34	0.00	92.11	

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
	Gon05216a-d	2.01	0.13	1.98	71.70	0.03	12.06	0.00	0.70	0.04	0.14	2.50	0.21	0.00	91.50	
	Gon05216a-e	2.17	0.00	2.01	71.83	0.01	12.31	0.11	0.69	0.05	0.09	2.53	0.19	0.09	92.08	
	Gon05216a-g	2.00	0.16	1.83	72.04	0.03	12.23	0.11	0.68	0.04	0.13	2.67	0.21	0.05	92.18	
	Gon05216a-h	0.50	0.10	0.54	59.25	1.78	15.76	0.18	1.56	0.01	0.10	6.36	7.40	0.00	93.54	feldspar
	Gon05216a-i	0.12	0.10	0.25	26.49	2.50	23.15	0.20	1.62	0.01	0.10	4.31	0.62	0.00	59.47	low total
	Gon05216a-j	0.29	0.10	0.40	52.85	0.90	12.16	0.19	2.24	0.01	0.01	3.13	0.63	0.00	72.90	low total
	Gon05216a-k	2.07	0.00	1.93	74.13	0.01	12.13	0.09	0.72	0.05	0.11	2.53	0.22	0.00	93.97	
	Gon05216a-l	2.14	0.00	1.86	73.59	0.02	12.13	0.10	0.69	0.05	0.13	2.71	0.19	0.09	93.70	
	Gon05216a-m	2.02	0.08	1.95	71.16	0.01	11.94	0.08	0.72	0.05	0.12	2.52	0.24	0.00	90.88	
	Gon05216a-n	0.76	0.03	0.73	60.37	2.01	16.92	0.14	1.21	0.00	0.09	3.52	0.41	0.00	86.19	low total
	Gon05216a-o	0.16	0.03	0.32	15.00	0.46	4.50	0.06	0.31	0.08	0.00	0.39	0.08	0.00	21.39	low total
	Gon05216a-p	0.13	0.00	0.23	48.26	1.89	18.51	0.10	1.52	0.01	0.05	2.98	0.40	0.00	74.09	low total
	<b>AVERAGE</b>	<b>2.07</b>	<b>0.07</b>	<b>1.94</b>	<b>72.36</b>	<b>0.02</b>	<b>12.10</b>	<b>0.08</b>	<b>0.70</b>	<b>0.04</b>	<b>0.12</b>	<b>2.60</b>	<b>0.25</b>	<b>0.04</b>	<b>92.39</b>	<b>Kobo'o Tuff (Silicic A)</b>
	<b>σ</b>	<b>0.09</b>	<b>0.07</b>	<b>0.09</b>	<b>0.94</b>	<b>0.01</b>	<b>0.13</b>	<b>0.04</b>	<b>0.02</b>	<b>0.01</b>	<b>0.01</b>	<b>0.09</b>	<b>0.07</b>	<b>0.05</b>	<b>0.98</b>	
Gon05 216b	Gon05216b-a	8.95	0.00	1.51	65.93	0.00	22.43	0.00	2.76	0.00	0.00	0.30	0.02	0.27	102.17	feldspar
vitric ash	Gon05216b-b	4.61	0.00	0.45	51.75	0.08	27.88	0.00	11.57	0.02	0.00	0.68	0.13	0.00	97.18	high CaO
n=10	Gon05216b-c	2.01	0.00	1.96	71.42	0.01	11.66	0.02	0.68	0.05	0.12	2.65	0.19	0.00	90.77	
	Gon05216b-d	2.13	0.00	1.93	72.14	0.01	12.15	0.12	0.71	0.05	0.11	2.75	0.23	0.09	92.44	
	Gon05216b-e	8.96	0.00	1.65	64.84	0.00	22.00	0.00	2.69	0.00	0.01	0.34	0.00	0.33	100.82	feldspar
	Gon05216b-f	2.06	0.05	1.86	73.20	0.01	12.08	0.09	0.70	0.07	0.12	2.53	0.26	0.05	93.09	
	Gon05216b-g	2.03	0.00	1.84	72.04	0.01	12.06	0.10	0.68	0.05	0.10	2.64	0.21	0.16	91.92	
	Gon05216b-h	2.10	0.00	1.76	72.08	0.02	11.89	0.09	0.66	0.04	0.09	2.51	0.26	0.04	91.55	
	Gon05216b-i	2.02	0.00	1.86	72.51	0.02	11.90	0.05	0.71	0.04	0.11	2.59	0.23	0.00	92.08	
	Gon05216b-j	2.14	0.00	1.85	71.17	0.01	11.61	0.03	0.69	0.04	0.10	2.77	0.20	0.03	90.62	
	Gon05216b-k	2.01	0.03	1.84	71.98	0.01	12.22	0.09	0.71	0.03	0.15	2.72	0.19	0.10	92.09	
	Gon05216b-l	2.06	0.00	1.83	72.24	0.02	12.10	0.09	0.71	0.03	0.11	2.65	0.18	0.01	92.03	
	Gon05216b-m	9.23	0.00	1.49	68.15	0.00	21.38	0.04	2.67	0.00	0.00	0.32	0.03	0.21	103.52	feldspar
	Gon05216b-n	2.24	0.00	1.88	71.05	0.01	11.85	0.14	0.68	0.05	0.10	2.75	0.26	0.01	91.02	
	Gon05216b-o	0.21	0.16	1.28	50.79	2.79	15.59	0.12	1.60	0.00	0.09	19.63	2.50	0.00	94.77	Fe-Mg-Ti mineral
	Gon05216b-p	1.40	0.00	1.69	69.61	0.01	11.05	0.06	0.68	0.04	0.14	2.64	0.26	0.04	87.63	low total
	<b>AVERAGE</b>	<b>2.08</b>	<b>0.01</b>	<b>1.86</b>	<b>71.98</b>	<b>0.02</b>	<b>11.95</b>	<b>0.08</b>	<b>0.69</b>	<b>0.05</b>	<b>0.11</b>	<b>2.66</b>	<b>0.22</b>	<b>0.05</b>	<b>91.76</b>	<b>Kobo'o Tuff (Silicic A)</b>
	<b>σ</b>	<b>0.07</b>	<b>0.02</b>	<b>0.05</b>	<b>0.64</b>	<b>0.01</b>	<b>0.21</b>	<b>0.04</b>	<b>0.02</b>	<b>0.01</b>	<b>0.02</b>	<b>0.09</b>	<b>0.03</b>	<b>0.05</b>	<b>0.77</b>	
Gon05 216b	Gon05216bph-a	8.42	0.00	1.43	66.47	0.02	22.40	0.00	2.69	0.00	0.00	0.27	0.00	0.27	101.97	
feldspar	Gon05216bph-b	8.73	0.05	1.87	66.74	0.00	22.21	0.00	2.08	0.01	0.00	0.24	0.02	0.22	102.18	
n=18	Gon05216bph-c	8.48	0.00	1.17	67.30	0.01	22.97	0.02	2.81	0.01	0.00	0.25	0.00	0.26	103.29	
	Gon05216bph-d	9.12	0.03	1.30	65.91	0.00	22.98	0.00	2.77	0.00	0.00	0.27	0.02	0.22	102.62	
	Gon05216bph-e	8.52	0.00	1.43	65.71	0.00	23.23	0.00	3.00	0.01	0.00	0.21	0.03	0.24	102.38	
	Gon05216bph-f	8.49	0.00	1.32	63.33	0.00	20.30	0.00	2.46	0.01	0.00	0.23	0.00	0.27	96.42	
	Gon05216bph-g	9.05	0.08	1.52	66.45	0.00	23.15	0.00	2.56	0.00	0.00	0.28	0.00	0.23	103.33	
	Gon05216bph-h	9.43	0.00	1.34	67.40	0.00	22.75	0.02	2.73	0.00	0.02	0.28	0.00	0.20	104.18	
	Gon05216bph-i	9.01	0.01	1.33	66.20	0.00	23.01	0.00	2.87	0.00	0.00	0.28	0.07	0.26	103.05	

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
	Gon05216bph-j	8.86	0.00	1.56	65.85	0.01	22.39	0.00	2.68	0.00	0.01	0.32	0.02	0.16	101.87	
	Gon05216bph-k	8.52	0.05	1.23	67.69	0.00	21.76	0.00	2.62	0.02	0.03	0.36	0.00	0.14	102.42	
	Gon05216bph-l	8.92	0.00	1.32	65.38	0.00	22.82	0.02	3.08	0.02	0.00	0.29	0.00	0.19	102.04	
	Gon05216bph-m	8.95	0.00	1.19	65.25	0.00	23.21	0.00	3.08	0.00	0.01	0.37	0.00	0.16	102.22	
	Gon05216bph-n	8.85	0.02	1.65	62.18	0.00	21.36	0.00	2.34	0.05	0.01	0.27	0.01	0.53	97.27	
	Gon05216bph-o	8.19	0.05	1.26	63.05	0.00	22.07	0.00	2.89	0.00	0.00	0.26	0.00	0.08	97.87	
	Gon05216bph-p	7.90	0.00	1.39	63.88	0.00	19.94	0.00	2.62	0.01	0.00	0.27	0.03	0.23	96.28	
	Gon05216bph-q	8.25	0.08	1.36	64.16	0.02	20.79	0.00	2.53	0.02	0.02	0.17	0.03	0.19	97.61	
	Gon05216bph-r	5.21	0.03	0.32	56.47	0.10	26.73	0.00	9.77	0.04	0.00	0.61	0.41	0.00	99.68	high CaO
	Gon05216bph-s	5.26	0.03	0.30	55.47	0.10	28.60	0.00	10.58	0.00	0.00	0.55	0.13	0.00	101.04	high CaO
	Gon05216bph-t	9.19	0.13	1.37	66.88	0.01	23.69	0.00	2.68	0.00	0.01	0.30	0.04	0.19	104.51	
	<b>AVERAGE</b>	<b>8.72</b>	<b>0.03</b>	<b>1.39</b>	<b>65.55</b>	<b>0.00</b>	<b>22.28</b>	<b>0.00</b>	<b>2.69</b>	<b>0.01</b>	<b>0.01</b>	<b>0.27</b>	<b>0.02</b>	<b>0.22</b>	<b>101.20</b>	<b>Kobo'o Tuff</b>
	<b>σ</b>	<b>0.40</b>	<b>0.04</b>	<b>0.17</b>	<b>1.61</b>	<b>0.01</b>	<b>1.07</b>	<b>0.01</b>	<b>0.25</b>	<b>0.01</b>	<b>0.01</b>	<b>0.05</b>	<b>0.02</b>	<b>0.09</b>	<b>2.74</b>	
Gon05 216c	Gon05216c-a	1.98	0.00	2.26	70.56	0.04	12.07	0.09	0.84	0.05	0.10	2.79	0.23	0.08	91.09	
vitric ash	Gon05216c-b	1.90	0.00	2.21	71.05	0.03	12.27	0.11	0.85	0.05	0.11	2.86	0.36	0.06	91.87	
n=17	Gon05216c-c	1.86	0.00	2.15	70.74	0.03	12.35	0.04	0.84	0.05	0.14	2.91	0.23	0.07	91.42	
	Gon05216c-d	1.93	0.03	2.09	71.27	0.02	12.29	0.07	0.82	0.05	0.10	2.89	0.23	0.00	91.79	
	Gon05216c-e	2.27	0.05	2.17	71.01	0.03	12.41	0.12	0.88	0.06	0.11	2.86	0.29	0.09	92.37	
	Gon05216c-f	1.94	0.00	2.15	70.30	0.03	12.21	0.07	0.84	0.04	0.11	2.85	0.27	0.00	90.81	
	Gon05216c-g	2.30	0.00	2.44	72.03	0.00	11.99	0.09	0.63	0.07	0.10	2.53	0.21	0.11	92.50	Kobo'o Tuff (Silicic A)
	Gon05216c-h	2.21	0.00	2.26	71.41	0.03	12.33	0.06	0.85	0.05	0.11	2.93	0.17	0.08	92.50	
	Gon05216c-i	2.44	0.13	2.46	70.89	0.03	12.41	0.08	0.86	0.05	0.09	2.79	0.25	0.00	92.48	
	Gon05216c-j	2.13	0.00	2.24	71.70	0.03	12.39	0.07	0.89	0.05	0.12	2.82	0.23	0.00	92.67	
	Gon05216c-k	2.48	0.13	2.33	71.13	0.03	12.72	0.06	0.87	0.06	0.13	2.88	0.25	0.15	93.23	
	Gon05216c-l	1.81	0.08	2.20	70.09	0.03	12.34	0.03	0.86	0.06	0.10	2.97	0.18	0.00	90.74	
	Gon05216c-m	2.03	0.00	2.18	71.88	0.04	12.47	0.05	0.86	0.05	0.13	2.70	0.17	0.04	92.60	
	Gon05216c-n	3.06	0.00	1.35	52.64	3.43	13.07	0.10	7.35	0.02	0.38	13.97	3.01	0.00	98.38	Kobo'o (Mafic)
	Gon05216c-o	2.00	0.00	2.12	70.35	0.03	12.18	0.00	0.86	0.03	0.11	2.78	0.25	0.11	90.82	
	Gon05216c-p	2.26	0.13	2.26	70.83	0.02	12.26	0.08	0.88	0.06	0.12	2.70	0.20	0.20	91.98	
	Gon05216c-q	2.34	0.05	2.31	71.18	0.02	12.52	0.06	0.87	0.05	0.12	2.89	0.18	0.05	92.66	
	Gon05216c-r	2.22	0.16	2.26	71.33	0.03	12.37	0.02	0.92	0.05	0.13	2.86	0.33	0.06	92.72	
	Gon05216c-s	3.24	0.17	1.35	53.16	2.90	13.05	0.22	6.88	0.02	0.46	14.31	2.56	0.00	98.32	Kobo'o (Mafic)
	Gon05216c-t	2.10	0.00	2.30	71.09	0.03	12.01	0.10	0.83	0.06	0.10	2.81	0.28	0.15	91.87	
	<b>AVERAGE</b>	<b>2.11</b>	<b>0.04</b>	<b>2.23</b>	<b>70.99</b>	<b>0.03</b>	<b>12.33</b>	<b>0.07</b>	<b>0.86</b>	<b>0.05</b>	<b>0.11</b>	<b>2.84</b>	<b>0.24</b>	<b>0.07</b>	<b>91.98</b>	<b>Kobo'o Tuff (Silicic B)</b>
	<b>σ</b>	<b>0.20</b>	<b>0.06</b>	<b>0.09</b>	<b>0.48</b>	<b>0.01</b>	<b>0.17</b>	<b>0.03</b>	<b>0.02</b>	<b>0.01</b>	<b>0.01</b>	<b>0.07</b>	<b>0.05</b>	<b>0.06</b>	<b>0.77</b>	
Gon05 216d	Gon05216d-a	2.53	0.00	2.05	74.67	0.06	12.32	0.05	0.64	0.07	0.08	2.54	0.22	0.07	95.30	
vitric ash	Gon05216d-b	2.19	0.18	2.32	72.62	0.00	12.39	0.11	0.64	0.06	0.08	2.44	0.28	0.11	93.42	
n=16	Gon05216d-c	2.46	0.05	2.14	71.62	0.02	12.07	0.03	0.60	0.05	0.12	2.47	0.23	0.00	91.87	
	Gon05216d-d	2.28	0.00	2.34	73.19	0.01	12.09	0.06	0.61	0.05	0.09	2.48	0.26	0.15	93.63	
	Gon05216d-e	2.20	0.00	2.20	71.92	0.01	12.13	0.08	0.64	0.07	0.07	2.44	0.25	0.01	92.02	
	Gon05216d-f	2.52	0.00	2.07	73.62	0.01	12.88	0.12	0.60	0.06	0.09	2.43	0.22	0.03	94.65	

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
	Gon05216d-g	2.22	0.00	2.48	73.35	0.01	12.00	0.05	0.60	0.05	0.12	2.50	0.21	0.00	93.59	
	Gon05216d-h	2.12	0.18	2.25	72.55	0.01	12.07	0.04	0.63	0.06	0.11	2.52	0.21	0.05	92.80	
	Gon05216d-g	2.37	0.03	2.22	74.33	0.00	12.25	0.07	0.60	0.06	0.10	2.36	0.21	0.00	94.59	
	Gon05216d-h	2.35	0.00	2.44	73.95	0.00	12.35	0.10	0.61	0.06	0.08	2.56	0.22	0.03	94.76	
	Gon05216d-i	2.06	0.00	2.30	71.03	0.00	12.11	0.11	0.60	0.05	0.08	2.33	0.26	0.06	90.98	
	Gon05216d-j	2.50	0.08	2.25	74.56	0.01	12.53	0.07	0.63	0.04	0.11	2.43	0.19	0.22	95.61	
	Gon05216d-k	1.95	0.00	2.05	69.25	0.04	8.23	0.04	0.68	0.06	0.09	2.58	0.19	0.00	85.15	low total
	Gon05216d-l	2.47	0.03	2.29	73.92	0.02	12.36	0.08	0.65	0.06	0.10	2.35	0.24	0.03	94.61	
	Gon05216d-m	2.35	0.00	2.03	72.50	0.02	12.58	0.09	0.85	0.05	0.14	2.74	0.19	0.07	93.62	Kobo'o Tuff (Silicic B)
	Gon05216d-n	2.29	0.05	2.32	74.57	0.00	11.97	0.05	0.62	0.07	0.08	2.41	0.18	0.12	94.73	
	Gon05216d-o	2.10	0.00	2.43	71.78	0.02	12.04	0.08	0.61	0.06	0.07	2.45	0.20	0.13	91.97	
	Gon05216d-p	2.21	0.00	2.11	75.04	0.01	11.38	0.07	0.60	0.06	0.08	2.53	0.23	0.03	94.34	
	<b>AVERAGE</b>	<b>2.31</b>	<b>0.04</b>	<b>2.26</b>	<b>73.29</b>	<b>0.01</b>	<b>12.18</b>	<b>0.07</b>	<b>0.62</b>	<b>0.06</b>	<b>0.09</b>	<b>2.45</b>	<b>0.22</b>	<b>0.07</b>	<b>93.68</b>	<b>Kobo'o Tuff (Silicic A)</b>
	<b>σ</b>	<b>0.16</b>	<b>0.06</b>	<b>0.13</b>	<b>1.25</b>	<b>0.01</b>	<b>0.32</b>	<b>0.03</b>	<b>0.02</b>	<b>0.01</b>	<b>0.02</b>	<b>0.07</b>	<b>0.03</b>	<b>0.06</b>	<b>1.39</b>	
Gon05 217 feldspar n=17	Gon05217ph-a	3.56	0.00	0.10	50.80	0.12	29.60	0.00	12.82	0.03	0.00	0.59	0.06	0.04	97.71	
	Gon05217ph-b	2.52	0.08	0.06	49.26	0.14	32.62	0.05	15.21	0.03	0.02	0.57	0.04	0.02	100.60	
	Gon05217ph-c	2.53	0.06	0.11	48.33	0.13	32.08	0.00	14.80	0.00	0.01	0.64	0.06	0.00	98.76	
	Gon05217ph-d	2.75	0.00	0.08	51.29	0.12	26.61	0.03	13.21	0.00	0.00	0.62	0.04	0.05	94.80	low total
	Gon05217ph-e	2.34	0.17	0.09	492.72	0.11	26.37	0.01	13.30	0.04	0.01	0.54	0.02	0.00	535.73	machine error
	Gon05217ph-f	2.77	0.00	0.10	50.28	0.14	30.12	0.00	14.23	0.01	0.00	0.55	0.00	0.06	98.27	
	Gon05217ph-g	3.53	0.00	0.14	50.82	0.16	30.80	0.00	13.45	0.01	0.02	0.65	0.06	0.04	99.67	
	Gon05217ph-h	2.76	0.19	0.10	46.29	0.11	30.34	0.01	14.54	0.02	0.02	0.62	0.11	0.12	95.23	
	Gon05217ph-i	2.87	0.00	0.08	50.36	0.15	31.19	0.01	14.86	0.01	0.01	0.64	0.11	0.00	100.30	
	Gon05217ph-j	3.32	0.00	0.14	51.27	0.16	28.53	0.02	12.95	0.06	0.00	0.71	0.08	0.00	97.24	
	Gon05217ph-k	2.80	0.00	0.08	49.37	0.13	30.91	0.01	15.13	0.02	0.00	0.62	0.03	0.00	99.11	
	Gon05217ph-l	2.16	0.09	0.06	50.58	0.14	34.32	0.00	15.92	0.02	0.00	0.67	0.02	0.08	104.05	
	Gon05217ph-m	3.16	0.00	0.08	51.65	0.14	29.52	0.00	14.22	0.00	0.01	0.70	0.11	0.08	99.66	
	Gon05217ph-n	3.27	0.00	0.09	52.96	0.15	33.39	0.00	13.93	0.01	0.01	0.66	0.07	0.03	104.58	
	Gon05217ph-o	2.50	0.05	0.11	49.64	0.16	31.36	0.00	14.40	0.01	0.03	0.75	0.11	0.00	99.13	
	Gon05217ph-p	2.84	0.00	0.09	49.57	0.15	31.17	0.00	14.87	0.00	0.00	0.68	0.05	0.07	99.49	
	Gon05217ph-q	2.81	0.22	0.09	49.93	0.10	26.89	0.00	12.92	0.14	0.00	0.61	0.05	0.00	93.77	low total
	Gon05217ph-r	3.83	0.00	0.10	50.00	0.15	27.61	0.00	12.57	0.01	0.01	0.59	0.05	0.11	95.04	
	Gon05217ph-s	3.80	0.00	0.10	49.51	0.10	28.27	0.00	13.16	0.02	0.00	0.67	0.11	0.00	95.74	
	Gon05217ph-t	3.18	0.14	0.12	47.74	0.13	30.17	0.00	14.53	0.01	0.00	0.70	0.11	0.00	96.81	
	<b>AVERAGE</b>	<b>3.02</b>	<b>0.04</b>	<b>0.10</b>	<b>49.91</b>	<b>0.14</b>	<b>30.71</b>	<b>0.01</b>	<b>14.21</b>	<b>0.02</b>	<b>0.01</b>	<b>0.65</b>	<b>0.07</b>	<b>0.04</b>	<b>98.90</b>	
	<b>σ</b>	<b>0.48</b>	<b>0.06</b>	<b>0.02</b>	<b>1.54</b>	<b>0.02</b>	<b>1.78</b>	<b>0.01</b>	<b>0.94</b>	<b>0.01</b>	<b>0.01</b>	<b>0.05</b>	<b>0.04</b>	<b>0.04</b>	<b>2.65</b>	
Gon05 219a vitric ash n=17	Gon05219A-a	0.75	0.08	2.10	71.56	0.01	11.95	0.06	0.70	0.05	0.10	2.47	0.17	0.00	90.00	
	Gon05219A-b	9.23	0.00	2.03	65.53	0.00	21.59	0.00	2.17	0.00	0.00	0.24	0.03	0.33	101.16	feldspar
	Gon05219A-c	0.73	0.08	1.85	70.72	0.02	11.83	0.12	0.66	0.05	0.13	2.50	0.18	0.26	89.12	
	Gon05219A-d	0.85	0.02	1.91	70.99	0.02	12.21	0.12	0.69	0.05	0.10	2.56	0.25	0.03	89.81	
	Gon05219A-e	1.04	0.11	1.86	71.76	0.00	12.32	0.06	0.71	0.04	0.12	2.61	0.21	0.04	90.88	

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
	Gon05219A-f	0.72	0.00	1.80	71.64	0.02	12.34	0.05	0.72	0.04	0.14	2.50	0.17	0.04	90.18	
	Gon05219A-g	0.81	0.00	1.83	71.87	0.02	12.16	0.07	0.70	0.05	0.09	2.48	0.23	0.19	90.50	
	Gon05219A-h	0.90	0.00	1.95	72.09	0.03	12.15	0.07	0.69	0.05	0.13	2.55	0.22	0.00	90.84	
	Gon05219A-i	0.83	0.13	1.81	72.32	0.01	12.07	0.09	0.69	0.04	0.09	2.58	0.25	0.01	90.93	
	Gon05219A-j	0.77	0.00	2.02	71.99	0.02	12.14	0.08	0.68	0.04	0.10	2.42	0.18	0.03	90.48	
	Gon05219A-k	9.48	0.02	1.47	64.47	0.00	22.29	0.01	2.72	0.00	0.02	0.38	0.00	0.23	101.09	feldspar
	Gon05219A-l	0.76	0.00	1.77	70.97	0.01	11.81	0.07	0.67	0.04	0.13	2.52	0.14	0.00	88.90	
	Gon05219A-m	0.72	0.00	1.84	71.57	0.00	12.28	0.07	0.67	0.03	0.12	2.56	0.22	0.13	90.21	
	Gon05219A-n	0.90	0.16	1.83	71.87	0.02	11.92	0.06	0.65	0.04	0.09	2.51	0.18	0.05	90.29	
	Gon05219A-o	0.92	0.01	1.88	71.23	0.01	12.16	0.06	0.66	0.04	0.11	2.50	0.30	0.15	90.04	
	Gon05219A-p	0.83	0.01	1.89	71.41	0.01	12.17	0.08	0.66	0.04	0.10	2.56	0.29	0.12	90.16	
	Gon05219A-q	0.50	0.05	1.90	69.11	0.01	11.67	0.04	0.67	0.03	0.09	2.51	0.20	0.18	86.96	low total
	Gon05219A-r	0.74	0.13	1.99	72.79	0.03	12.04	0.06	0.68	0.05	0.10	2.56	0.19	0.03	91.41	
	Gon05219A-s	0.86	0.00	1.87	72.82	0.02	12.31	0.08	0.68	0.04	0.16	2.55	0.20	0.07	91.65	
	Gon05219A-t	0.91	0.03	2.09	72.53	0.02	12.31	0.08	0.66	0.04	0.10	2.48	0.20	0.18	91.64	
	Gon05219A-u	8.18	0.00	1.66	62.02	0.01	19.49	0.00	2.34	0.02	0.00	0.31	0.02	0.32	94.36	feldspar
	<b>AVERAGE</b>	<b>0.82</b>	<b>0.04</b>	<b>1.90</b>	<b>71.77</b>	<b>0.02</b>	<b>12.13</b>	<b>0.08</b>	<b>0.68</b>	<b>0.04</b>	<b>0.11</b>	<b>2.52</b>	<b>0.21</b>	<b>0.08</b>	<b>90.41</b>	<b>Kobo'o Tuff (Silicic A)</b>
	<b>σ</b>	<b>0.09</b>	<b>0.06</b>	<b>0.10</b>	<b>0.62</b>	<b>0.01</b>	<b>0.17</b>	<b>0.02</b>	<b>0.02</b>	<b>0.01</b>	<b>0.02</b>	<b>0.05</b>	<b>0.04</b>	<b>0.08</b>	<b>0.77</b>	
Gon05 219b	Gon05219b-a	0.93	0.00	1.95	70.93	0.01	12.02	0.03	0.70	0.04	0.09	2.67	0.22	0.15	89.75	
vitric ash	Gon05219b-b	0.83	0.00	1.89	71.05	0.01	12.08	0.12	0.72	0.06	0.15	2.67	0.20	0.10	89.88	
n=20	Gon05219b-c	0.96	0.10	1.89	71.56	0.01	12.27	0.15	0.72	0.05	0.08	2.51	0.26	0.07	90.64	
	Gon05219b-d	0.80	0.00	1.97	71.92	0.02	12.23	0.08	0.72	0.04	0.11	2.65	0.21	0.03	90.78	
	Gon05219b-e	0.96	0.00	1.99	71.27	0.02	12.36	0.04	0.69	0.05	0.11	2.69	0.27	0.05	90.50	
	Gon05219b-f	0.78	0.00	1.85	70.16	0.02	12.17	0.06	0.72	0.04	0.11	2.73	0.23	0.02	88.90	
	Gon05219b-g	1.02	0.03	2.10	71.70	0.02	12.21	0.06	0.74	0.04	0.16	2.80	0.28	0.02	91.18	
	Gon05219b-h	0.93	0.00	1.93	71.99	0.01	12.29	0.08	0.70	0.04	0.12	2.53	0.24	0.00	90.87	
	Gon05219b-i	0.63	0.06	0.94	55.32	2.62	20.87	0.10	1.20	0.01	0.04	6.25	0.83	0.02	88.89	Kobo'o Tuff (Mafic)
	Gon05219b-j	0.86	0.15	1.91	71.81	0.02	12.30	0.13	0.71	0.06	0.12	2.60	0.23	0.00	90.89	
	Gon05219b-k	0.86	0.13	1.89	72.44	0.02	11.96	0.09	0.72	0.05	0.16	2.66	0.16	0.06	91.20	
	Gon05219b-l	0.85	0.00	1.99	72.03	0.01	12.11	0.09	0.73	0.05	0.11	2.67	0.24	0.16	91.05	
	Gon05219b-m	1.01	0.00	2.06	72.89	0.01	12.15	0.07	0.72	0.05	0.14	2.54	0.16	0.03	91.84	
	Gon05219b-n	0.84	0.13	1.88	71.99	0.01	12.13	0.07	0.71	0.04	0.13	2.79	0.24	0.08	91.06	
	Gon05219b-o	0.75	0.18	1.89	70.98	0.02	12.19	0.10	0.73	0.04	0.11	2.68	0.22	0.05	89.95	
	Gon05219b-p	0.84	0.06	2.01	71.27	0.00	11.96	0.10	0.72	0.04	0.13	2.71	0.24	0.04	90.13	
	Gon05219b-q	0.88	0.00	1.80	71.76	0.02	12.06	0.09	0.66	0.04	0.10	2.61	0.18	0.04	90.25	
	Gon05219b-r	0.88	0.11	1.89	71.90	0.02	12.33	0.13	0.69	0.06	0.10	2.60	0.25	0.17	91.15	
	Gon05219b-s	0.75	0.00	1.97	71.36	0.02	12.07	0.10	0.72	0.05	0.11	2.65	0.27	0.05	90.12	
	Gon05219b-t	0.81	0.14	1.88	71.56	0.01	12.15	0.08	0.71	0.05	0.11	2.67	0.25	0.07	90.50	
	Gon05219b-u	0.72	0.01	1.85	71.85	0.01	12.00	0.06	0.74	0.04	0.09	2.50	0.22	0.10	90.19	
	<b>AVERAGE</b>	<b>0.86</b>	<b>0.05</b>	<b>1.93</b>	<b>71.62</b>	<b>0.02</b>	<b>12.15</b>	<b>0.09</b>	<b>0.71</b>	<b>0.05</b>	<b>0.12</b>	<b>2.65</b>	<b>0.23</b>	<b>0.06</b>	<b>90.54</b>	<b>Kobo'o Tuff (Silicic A)</b>
	<b>σ</b>	<b>0.08</b>	<b>0.07</b>	<b>0.07</b>	<b>0.59</b>	<b>0.01</b>	<b>0.12</b>	<b>0.03</b>	<b>0.02</b>	<b>0.01</b>	<b>0.02</b>	<b>0.08</b>	<b>0.03</b>	<b>0.05</b>	<b>0.66</b>	

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
Gon05 219c	<i>Gon05219c-a</i>	0.90	0.16	2.21	71.23	0.03	12.20	0.07	0.70	0.04	0.11	2.52	0.26	0.08	90.52	Kobo'o Tuff (Silicic A)
vitric ash	<i>Gon05219c-b</i>	2.51	0.01	1.34	51.12	3.31	13.04	0.16	7.19	0.02	0.40	14.01	2.64	0.00	95.77	
n=16	<i>Gon05219c-c</i>	1.64	0.06	1.27	51.13	2.86	12.56	0.15	6.63	0.01	0.38	12.92	2.82	0.00	92.43	Kobo'o Tuff (Silicic A)
	<i>Gon05219c-d</i>	1.46	0.12	1.30	49.50	2.99	12.50	0.15	6.89	0.02	0.41	13.69	2.83	0.00	91.87	
	<i>Gon05219c-e</i>	3.26	0.00	1.43	52.90	2.73	13.06	0.21	6.72	0.03	0.42	14.01	2.69	0.00	97.45	low CaO, FeO
	<i>Gon05219c-f</i>	0.79	0.06	2.16	70.22	0.01	12.37	0.07	0.64	0.05	0.11	2.39	0.16	0.14	89.18	
	<i>Gon05219c-g</i>	2.86	0.04	1.40	52.98	2.87	12.93	0.20	6.81	0.03	0.47	14.07	2.83	0.00	97.48	Kobo'o Tuff (Silicic A)
	<i>Gon05219c-h</i>	8.40	0.00	2.62	65.51	0.01	20.58	0.01	1.06	0.00	0.00	0.37	0.00	0.41	98.96	
	<i>Gon05219c-i</i>	2.48	0.01	1.29	50.48	2.95	12.56	0.16	7.05	0.03	0.42	14.23	2.66	0.00	94.33	Kobo'o Tuff (Silicic B)
	<i>Gon05219c-j</i>	2.22	0.10	1.26	50.31	3.11	12.70	0.10	6.90	0.01	0.42	13.47	2.99	0.00	93.60	
	<i>Gon05219c-k</i>	2.81	0.00	1.44	52.10	2.77	12.74	0.15	6.77	0.02	0.38	13.50	2.64	0.00	95.33	Kobo'o Tuff (Silicic B)
	<i>Gon05219c-l</i>	3.26	0.09	1.36	50.52	2.95	12.95	0.16	6.99	0.02	0.42	13.91	2.67	0.00	95.32	
	<i>Gon05219c-m</i>	3.14	0.00	1.36	50.94	3.11	12.92	0.18	7.21	0.01	0.44	14.04	3.08	0.00	96.44	Kobo'o Tuff (Mafic)
	<i>Gon05219c-n</i>	2.93	0.00	1.39	49.84	2.74	12.61	0.19	6.78	0.03	0.42	13.94	2.65	0.00	93.51	
	<i>Gon05219c-o</i>	1.25	0.00	1.14	49.75	3.14	12.70	0.11	6.89	0.03	0.38	13.41	2.86	0.00	91.66	Kobo'o Tuff (Mafic)
	<i>Gon05219c-p</i>	2.04	0.07	1.34	51.60	3.04	12.95	0.13	7.14	0.02	0.35	11.95	2.82	0.00	93.46	
	<i>Gon05219c-q</i>	3.27	0.04	1.28	50.04	2.86	12.60	0.18	7.15	0.03	0.48	13.99	2.80	0.00	94.72	Kobo'o Tuff (Mafic)
	<i>Gon05219c-r</i>	0.91	0.19	2.07	70.39	0.03	12.72	0.14	0.89	0.05	0.12	2.85	0.18	0.07	90.61	
<i>Gon05219c-s</i>	2.80	0.00	1.33	51.79	2.83	12.91	0.21	6.79	0.02	0.46	14.06	2.80	0.00	96.02	Kobo'o Tuff (Mafic)	
<i>Gon05219c-t</i>	2.39	0.19	1.32	50.19	2.81	12.83	0.13	6.87	0.02	0.46	13.91	2.72	0.00	93.87		
	<b>AVERAGE</b>	<b>2.52</b>	<b>0.05</b>	<b>1.33</b>	<b>50.95</b>	<b>2.94</b>	<b>12.79</b>	<b>0.16</b>	<b>6.92</b>	<b>0.02</b>	<b>0.42</b>	<b>13.69</b>	<b>2.78</b>	<b>0.00</b>	<b>94.58</b>	Kobo'o Tuff (Mafic)
	<b>σ</b>	<b>0.65</b>	<b>0.06</b>	<b>0.07</b>	<b>1.08</b>	<b>0.16</b>	<b>0.19</b>	<b>0.03</b>	<b>0.18</b>	<b>0.01</b>	<b>0.04</b>	<b>0.57</b>	<b>0.13</b>	<b>0.00</b>	<b>1.81</b>	
Gon05 224a	<i>Gon05224a-a</i>	1.82	0.11	1.95	71.31	0.03	12.28	0.09	0.67	0.05	0.11	2.43	0.20	0.10	91.13	low total
vitric ash	<i>Gon05224a-b</i>	1.40	0.00	1.77	71.20	0.02	12.33	0.03	0.67	0.05	0.10	2.51	0.23	0.07	90.39	
n=18	<i>Gon05224a-c</i>	1.34	0.06	1.85	70.90	0.02	12.12	0.05	0.68	0.04	0.11	2.48	0.25	0.02	89.93	low total
	<i>Gon05224a-d</i>	0.38	0.00	0.45	15.72	0.27	3.70	0.04	0.28	0.18	0.00	0.79	0.09	0.00	21.90	
	<i>Gon05224a-e</i>	1.56	0.00	1.86	70.23	0.02	11.87	0.08	0.69	0.05	0.07	2.44	0.25	0.24	89.35	high CaO
	<i>Gon05224a-f</i>	1.50	0.00	1.77	72.03	0.01	11.51	0.12	0.70	0.04	0.14	2.54	0.21	0.08	90.64	
	<i>Gon05224a-g</i>	1.88	0.00	1.82	73.41	0.02	12.14	0.08	0.67	0.04	0.09	2.53	0.22	0.12	93.04	high CaO
	<i>Gon05224a-h</i>	1.59	0.06	1.92	70.97	0.01	11.99	0.10	0.66	0.05	0.11	2.51	0.20	0.09	90.26	
	<i>Gon05224a-i</i>	1.48	0.00	2.09	72.45	0.02	12.36	0.11	0.70	0.04	0.13	2.47	0.25	0.15	92.25	high CaO
	<i>Gon05224a-j</i>	1.77	0.00	1.93	70.78	0.01	12.38	0.06	0.68	0.04	0.12	2.51	0.23	0.01	90.51	
	<i>Gon05224a-k</i>	1.69	0.00	2.03	70.88	0.02	12.35	0.09	0.70	0.05	0.14	2.52	0.29	0.13	90.87	high CaO
	<i>Gon05224a-l</i>	1.43	0.00	1.88	70.16	0.01	11.95	0.05	0.65	0.03	0.10	2.45	0.27	0.08	89.04	
	<i>Gon05224a-m</i>	1.43	0.00	2.04	69.85	0.03	12.27	0.05	0.68	0.04	0.11	2.54	0.24	0.14	89.42	high CaO
	<i>Gon05224a-n</i>	1.71	0.00	1.98	71.36	0.01	12.29	0.07	0.68	0.04	0.12	2.48	0.22	0.04	91.01	
	<i>Gon05224a-p</i>	1.44	0.00	1.89	71.49	0.03	12.20	0.07	0.68	0.04	0.10	2.43	0.13	0.06	90.55	high CaO
	<i>Gon05224a-q</i>	1.52	0.00	0.13	69.95	0.03	13.40	0.04	3.76	0.02	0.00	0.10	0.00	0.00	88.95	
	<i>Gon05224a-r</i>	1.63	0.00	1.85	71.70	0.03	12.03	0.08	0.63	0.05	0.09	2.49	0.20	0.01	90.80	high CaO
	<i>Gon05224a-s</i>	1.48	0.05	1.93	71.78	0.02	12.33	0.08	0.65	0.04	0.12	2.57	0.20	0.09	91.36	
<i>Gon05224a-t</i>	1.37	0.00	2.04	69.74	0.01	11.91	0.10	0.65	0.05	0.08	2.40	0.24	0.16	88.74	high CaO	
<i>Gon05224a-u</i>	1.67	0.00	1.86	71.13	0.01	11.89	0.03	0.66	0.04	0.10	2.52	0.22	0.06	90.20		

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
	<b>AVERAGE</b>	<b>1.57</b>	<b>0.01</b>	<b>1.91</b>	<b>71.19</b>	<b>0.02</b>	<b>12.12</b>	<b>0.07</b>	<b>0.67</b>	<b>0.04</b>	<b>0.11</b>	<b>2.49</b>	<b>0.23</b>	<b>0.09</b>	<b>90.53</b>	<b>Kobo'o Tuff (Silicic A)</b>
	<b>σ</b>	<b>0.16</b>	<b>0.03</b>	<b>0.09</b>	<b>0.92</b>	<b>0.01</b>	<b>0.24</b>	<b>0.02</b>	<b>0.02</b>	<b>0.01</b>	<b>0.02</b>	<b>0.05</b>	<b>0.03</b>	<b>0.06</b>	<b>1.07</b>	
Gon05 224b	Gon05224b-a	1.85	0.00	1.98	71.35	0.02	12.28	0.08	0.64	0.06	0.12	2.58	0.26	0.01	91.22	
vitric ash	Gon05224b-b	1.82	0.00	1.99	70.46	0.01	12.34	0.04	0.61	0.04	0.11	2.39	0.25	0.14	90.20	
n=17	Gon05224b-c	1.50	0.00	1.84	69.72	0.02	12.02	0.09	0.64	0.04	0.13	2.59	0.24	0.09	88.93	
	Gon05224b-d	1.77	0.09	2.07	69.15	0.00	12.03	0.06	0.65	0.05	0.11	2.50	0.17	0.00	88.64	
	Gon05224b-e	1.69	0.11	2.16	68.97	0.01	12.10	0.13	0.66	0.04	0.11	2.51	0.29	0.00	88.78	
	<i>Gon05224b-f</i>	<i>1.83</i>	<i>0.01</i>	<i>2.02</i>	<i>68.93</i>	<i>0.01</i>	<i>12.07</i>	<i>0.03</i>	<i>0.65</i>	<i>0.05</i>	<i>0.11</i>	<i>2.45</i>	<i>0.28</i>	<i>0.01</i>	<i>88.46</i>	low total
	Gon05224b-g	1.85	0.21	1.98	72.00	0.02	12.36	0.11	0.69	0.04	0.11	2.40	0.26	0.09	92.13	
	Gon05224b-h	1.62	0.05	2.01	70.65	0.02	11.90	0.04	0.63	0.06	0.11	2.34	0.22	0.07	89.72	
	<i>Gon05224b-i</i>	<i>1.54</i>	<i>0.22</i>	<i>2.09</i>	<i>68.33</i>	<i>0.02</i>	<i>11.92</i>	<i>0.04</i>	<i>0.68</i>	<i>0.03</i>	<i>0.14</i>	<i>2.40</i>	<i>0.16</i>	<i>0.00</i>	<i>87.57</i>	low total
	Gon05224b-j	1.69	0.30	1.92	69.69	0.03	11.89	0.12	0.63	0.04	0.12	2.54	0.19	0.11	89.27	
	Gon05224b-k	1.79	0.06	2.13	70.54	0.02	11.87	0.10	0.61	0.04	0.11	2.61	0.19	0.02	90.09	
	Gon05224b-l	1.65	0.01	2.07	72.59	0.01	12.32	0.08	0.63	0.04	0.08	2.68	0.22	0.17	92.55	
	Gon05224b-m	1.63	0.16	1.99	72.42	0.02	11.85	0.03	0.65	0.05	0.13	2.45	0.26	0.03	91.66	
	Gon05224b-n	1.60	0.09	2.00	74.16	0.04	11.75	0.09	0.64	0.04	0.14	2.43	0.19	0.04	93.20	
	Gon05224b-o	1.85	0.00	2.04	73.28	0.02	12.38	0.05	0.64	0.04	0.11	2.48	0.27	0.02	93.18	
	Gon05224b-p	1.65	0.14	2.04	70.77	0.03	12.03	0.11	0.65	0.04	0.12	2.52	0.25	0.09	90.44	
	Gon05224b-q	1.57	0.02	2.13	71.37	0.02	12.07	0.05	0.65	0.05	0.12	2.41	0.11	0.11	90.68	
	Gon05224b-r	1.74	0.03	2.04	71.77	0.01	12.29	0.05	0.68	0.05	0.10	2.50	0.24	0.03	91.52	
	<i>Gon05224b-s</i>	<i>1.27</i>	<i>0.00</i>	<i>2.04</i>	<i>68.46</i>	<i>0.01</i>	<i>11.59</i>	<i>0.01</i>	<i>0.66</i>	<i>0.05</i>	<i>0.13</i>	<i>2.54</i>	<i>0.20</i>	<i>0.09</i>	<i>87.02</i>	low total
	Gon05224b-t	1.89	0.00	2.23	73.07	0.01	12.36	0.03	0.70	0.05	0.10	2.37	0.29	0.09	93.19	
	<b>AVERAGE</b>	<b>1.72</b>	<b>0.07</b>	<b>2.04</b>	<b>71.29</b>	<b>0.02</b>	<b>12.11</b>	<b>0.07</b>	<b>0.65</b>	<b>0.04</b>	<b>0.11</b>	<b>2.49</b>	<b>0.23</b>	<b>0.06</b>	<b>90.91</b>	<b>Kobo'o Tuff (Silicic B)</b>
	<b>σ</b>	<b>0.11</b>	<b>0.09</b>	<b>0.09</b>	<b>1.50</b>	<b>0.01</b>	<b>0.21</b>	<b>0.03</b>	<b>0.02</b>	<b>0.01</b>	<b>0.01</b>	<b>0.09</b>	<b>0.05</b>	<b>0.05</b>	<b>1.58</b>	
Gon05 225	Gon05225-a	1.62	0.00	1.35	72.80	0.03	12.37	0.11	0.70	0.04	0.10	2.72	0.27	0.14	92.25	
vitric ash	<i>Gon05225-b</i>	<i>1.76</i>	<i>0.08</i>	<i>1.53</i>	<i>65.48</i>	<i>0.01</i>	<i>11.86</i>	<i>0.13</i>	<i>0.69</i>	<i>0.04</i>	<i>0.13</i>	<i>2.55</i>	<i>0.27</i>	<i>0.11</i>	<i>84.63</i>	low total
n=18	Gon05225-c	1.93	0.00	1.58	72.21	0.01	11.92	0.08	0.56	0.04	0.11	2.11	0.17	0.10	90.84	
	Gon05225-e	1.59	0.02	1.55	69.67	0.02	12.24	0.07	0.73	0.06	0.10	2.67	0.27	0.08	89.08	
	Gon05225-f	1.77	0.10	1.68	71.04	0.02	12.34	0.07	0.70	0.05	0.11	2.58	0.24	0.14	90.83	
	Gon05225-g	1.66	0.00	1.63	71.48	0.01	11.80	0.05	0.68	0.05	0.14	2.61	0.24	0.11	90.46	
	<i>Gon05225-h</i>	<i>1.54</i>	<i>0.00</i>	<i>1.51</i>	<i>69.18</i>	<i>0.01</i>	<i>11.74</i>	<i>0.07</i>	<i>0.66</i>	<i>0.05</i>	<i>0.10</i>	<i>2.61</i>	<i>0.22</i>	<i>0.10</i>	<i>87.81</i>	low total
	Gon05225-i	1.70	0.07	1.52	70.55	0.02	11.68	0.11	0.69	0.05	0.15	2.65	0.16	0.01	89.37	
	Gon05225-k	1.89	0.00	1.47	71.47	0.03	11.79	0.08	0.71	0.03	0.13	2.69	0.27	0.10	90.68	
	Gon05225-l	1.59	0.00	1.63	70.72	0.02	12.42	0.06	0.70	0.05	0.10	2.53	0.16	0.07	90.04	
	Gon05225-m	1.85	0.00	1.60	73.68	0.01	12.43	0.09	0.68	0.04	0.13	2.62	0.26	0.03	93.42	
	Gon05225-n	1.87	0.05	1.48	71.72	0.02	12.21	0.13	0.69	0.05	0.10	2.56	0.22	0.07	91.17	
	Gon05225-o	1.78	0.00	1.61	71.26	0.01	12.25	0.07	0.67	0.08	0.13	2.58	0.18	0.03	90.66	
	Gon05225-p	1.72	0.00	1.57	70.40	0.01	12.03	0.08	0.69	0.04	0.13	2.56	0.25	0.05	89.54	
	Gon05225-q	2.08	0.16	1.49	71.64	0.02	12.27	0.09	0.79	0.05	0.12	2.50	0.18	0.00	91.39	
	Gon05225-r	1.77	0.00	1.48	71.61	0.01	11.97	0.04	0.67	0.05	0.11	2.44	0.23	0.03	90.40	
	Gon05225-s	1.82	0.00	1.69	70.59	0.01	11.74	0.07	0.70	0.05	0.12	2.48	0.18	0.08	89.54	



DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
	Gon05225-t	1.68	0.00	1.55	71.10	0.02	11.87	0.05	0.72	0.04	0.11	2.56	0.23	0.05	89.99	
	Gon05225-u	1.65	0.00	1.62	70.10	0.01	11.55	0.14	0.67	0.08	0.14	2.28	0.28	0.06	88.59	
	Gon05225-v	1.71	0.00	1.59	70.87	0.01	12.12	0.06	0.73	0.06	0.09	2.48	0.28	0.04	90.06	
	<b>AVERAGE</b>	<b>1.76</b>	<b>0.02</b>	<b>1.56</b>	<b>71.27</b>	<b>0.02</b>	<b>12.06</b>	<b>0.08</b>	<b>0.69</b>	<b>0.05</b>	<b>0.12</b>	<b>2.53</b>	<b>0.23</b>	<b>0.07</b>	<b>90.46</b>	<b>Kobo'o Tuff (Silicic A)</b>
	<b>σ</b>	<b>0.13</b>	<b>0.05</b>	<b>0.08</b>	<b>0.96</b>	<b>0.01</b>	<b>0.28</b>	<b>0.03</b>	<b>0.04</b>	<b>0.01</b>	<b>0.02</b>	<b>0.15</b>	<b>0.04</b>	<b>0.04</b>	<b>1.15</b>	
Gon05 228	Gon05228-a	1.97	0.13	2.30	73.02	0.01	12.02	0.03	0.52	0.03	0.09	2.06	0.21	0.11	92.51	
vitric ash	Gon05228-b	2.34	0.05	2.68	72.56	0.00	12.08	0.05	0.47	0.05	0.05	1.88	0.09	0.03	92.34	
n=19	Gon05228-c	2.49	0.05	2.72	73.72	0.01	12.09	0.05	0.46	0.03	0.05	1.94	0.12	0.01	93.73	
	Gon05228-d	2.21	0.09	2.53	72.89	0.01	11.90	0.01	0.50	0.04	0.07	1.93	0.15	0.14	92.48	
	Gon05228-e	2.56	0.00	2.81	73.63	0.00	11.77	0.04	0.42	0.03	0.09	1.75	0.19	0.00	93.29	
	Gon05228-f	1.98	0.19	2.53	65.90	0.00	10.74	0.00	0.45	0.05	0.06	1.77	0.25	0.19	84.12	low total
	Gon05228-g	2.47	0.00	2.81	72.52	0.02	12.18	0.00	0.46	0.03	0.06	1.92	0.16	0.00	92.62	
	Gon05228-h	2.41	0.15	2.65	74.18	0.02	12.10	0.06	0.44	0.03	0.09	1.87	0.17	0.04	94.21	
	Gon05228-i	2.52	0.05	2.73	73.07	0.01	11.88	0.07	0.41	0.04	0.07	1.77	0.19	0.00	92.82	
	Gon05228-k	2.26	0.03	2.37	72.89	0.01	12.22	0.02	0.53	0.03	0.09	2.07	0.11	0.14	92.77	
	Gon05228-l	2.37	0.00	2.57	73.92	0.00	12.00	0.03	0.41	0.03	0.06	1.71	0.17	0.01	93.27	
	Gon05228-m	2.20	0.13	2.54	73.43	0.01	11.86	0.01	0.44	0.03	0.06	1.99	0.20	0.15	93.04	
	Gon05228-n	2.63	0.00	2.58	74.32	0.00	11.99	0.06	0.41	0.03	0.03	1.62	0.10	0.01	93.79	
	Gon05228-o	2.07	0.00	2.48	73.00	0.01	12.08	0.01	0.45	0.04	0.08	1.88	0.24	0.03	92.38	
	Gon05228-p	2.44	0.04	2.65	73.82	0.00	11.90	0.04	0.42	0.05	0.08	1.73	0.14	0.00	93.32	
	Gon05228-r	2.23	0.15	2.53	74.98	0.00	12.31	0.08	0.47	0.04	0.08	1.84	0.16	0.03	94.92	
	Gon05228-s	2.76	0.13	2.69	75.58	0.00	12.16	0.08	0.43	0.05	0.06	1.75	0.21	0.00	95.91	
	Gon05228-t	2.12	0.05	2.48	72.72	0.00	12.06	0.04	0.44	0.04	0.10	1.81	0.16	0.12	92.14	
	Gon05228-u	2.08	0.01	2.06	72.93	0.01	11.58	0.08	0.41	0.04	0.07	1.65	0.22	0.00	91.14	
	Gon05228-v	2.29	0.00	2.68	71.60	0.01	12.02	0.01	0.44	0.04	0.05	1.78	0.22	0.09	91.23	
	<b>AVERAGE</b>	<b>2.34</b>	<b>0.06</b>	<b>2.57</b>	<b>73.41</b>	<b>0.01</b>	<b>12.01</b>	<b>0.04</b>	<b>0.45</b>	<b>0.04</b>	<b>0.07</b>	<b>1.84</b>	<b>0.17</b>	<b>0.05</b>	<b>93.05</b>	<b>Sifi Tuff</b>
	<b>σ</b>	<b>0.21</b>	<b>0.06</b>	<b>0.18</b>	<b>0.93</b>	<b>0.01</b>	<b>0.17</b>	<b>0.03</b>	<b>0.04</b>	<b>0.01</b>	<b>0.02</b>	<b>0.13</b>	<b>0.04</b>	<b>0.06</b>	<b>1.15</b>	
Gon05 229	Gon05229ph-a	5.56	0.05	0.30	56.98	0.01	28.90	0.00	10.38	0.00	0.02	0.43	0.07	0.04	102.74	low CaO
feldspar	Gon05229ph-b	3.53	0.00	0.12	50.92	0.09	27.12	0.00	13.34	0.02	0.01	0.78	0.10	0.04	96.08	
n=13	Gon05229ph-c	3.85	0.13	0.11	52.84	0.11	29.11	0.00	13.13	0.01	0.00	0.84	0.04	0.00	100.17	
	Gon05229ph-d	3.69	0.03	0.13	50.59	0.13	30.04	0.03	13.25	0.00	0.00	0.77	0.07	0.00	98.73	
	Gon05229ph-e	3.19	0.05	0.09	44.94	0.08	23.59	0.00	12.76	0.00	0.01	0.78	0.07	0.00	85.57	low total
	Gon05229ph-f	3.64	0.11	0.20	49.23	0.11	26.99	0.01	11.63	0.06	0.01	0.74	0.07	0.04	92.84	low total
	Gon05229ph-g	3.49	0.00	0.13	55.68	0.11	33.67	0.00	12.86	0.02	0.01	0.87	0.08	0.03	106.95	
	Gon05229ph-h	4.15	0.00	0.13	55.32	0.14	30.52	0.00	12.33	0.00	0.00	0.80	0.05	0.02	103.45	
	Gon05229ph-i	3.78	0.00	0.15	52.73	0.13	27.01	0.00	12.04	0.03	0.02	0.74	0.14	0.04	96.82	
	Gon05229ph-j	3.50	0.00	0.10	47.43	0.10	24.44	0.00	11.79	0.22	0.00	0.78	0.10	0.00	88.47	low total
	Gon05229ph-k	2.82	0.03	0.08	46.63	0.08	26.45	0.01	12.77	0.01	0.00	0.77	0.13	0.00	89.79	low total
	Gon05229ph-l	3.99	0.08	0.13	51.91	0.11	27.75	0.00	12.05	0.10	0.01	0.65	0.05	0.00	96.84	
	Gon05229ph-m	3.28	0.00	0.12	50.91	0.12	29.94	0.00	13.35	0.00	0.00	0.79	0.01	0.03	98.55	
	Gon05229ph-n	3.76	0.08	0.12	50.55	0.13	28.22	0.00	12.91	0.00	0.01	0.85	0.10	0.01	96.75	

## DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)														Comments
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO	Total	
	Gon05229ph-o	3.72	0.06	0.11	52.18	0.11	29.78	0.00	13.17	0.07	0.00	0.72	0.00	0.03	99.98	
	<i>Gon05229ph-p</i>	3.14	0.09	0.10	48.28	0.10	27.64	0.00	11.86	0.04	0.02	0.65	0.14	0.00	92.04	low total
	<i>Gon05229ph-q</i>	4.78	0.00	0.28	52.64	0.02	27.37	0.00	10.05	0.06	0.00	0.44	0.04	0.05	95.73	low CaO
	Gon05229ph-r	3.51	0.00	0.13	48.40	0.13	31.06	0.02	13.58	0.00	0.03	0.84	0.07	0.00	97.78	
	Gon05229ph-s	4.02	0.00	0.17	48.83	0.11	29.64	0.00	12.85	0.01	0.00	0.80	0.01	0.00	96.44	
	Gon05229ph-t	4.13	0.00	0.14	51.21	0.13	29.14	0.01	12.86	0.00	0.00	0.85	0.13	0.03	98.63	
	<b>AVERAGE</b>	<b>3.76</b>	<b>0.03</b>	<b>0.13</b>	<b>51.70</b>	<b>0.12</b>	<b>29.46</b>	<b>0.00</b>	<b>12.90</b>	<b>0.02</b>	<b>0.01</b>	<b>0.79</b>	<b>0.06</b>	<b>0.02</b>	<b>99.01</b>	<b>HMDS Tuff</b>
	<b>σ</b>	<b>0.26</b>	<b>0.04</b>	<b>0.02</b>	<b>2.14</b>	<b>0.01</b>	<b>1.78</b>	<b>0.01</b>	<b>0.49</b>	<b>0.03</b>	<b>0.01</b>	<b>0.06</b>	<b>0.04</b>	<b>0.02</b>	<b>3.12</b>	
Gon05 230	Gon05230ph-a	6.73	0.03	0.51	59.11	0.02	26.68	0.02	7.62	0.00	0.01	0.37	0.04	0.00	101.14	
feldspar	<i>Gon05230ph-b</i>	4.59	0.00	0.21	50.06	0.08	29.32	0.00	11.14	0.00	0.03	0.57	0.07	0.06	96.14	high CaO
n=13	Gon05230ph-c	6.18	0.00	0.50	58.51	0.03	26.73	0.00	7.86	0.00	0.00	0.38	0.10	0.04	100.34	
	Gon05230ph-d	6.31	0.00	0.43	57.87	0.04	28.05	0.00	8.26	0.01	0.00	0.41	0.09	0.12	101.61	
	<i>Gon05230ph-e</i>	5.72	0.00	0.37	54.31	0.02	27.00	0.00	10.25	0.01	0.00	0.41	0.00	0.03	98.13	high CaO
	Gon05230ph-f	6.83	0.03	0.60	59.02	0.04	25.36	0.00	7.20	0.00	0.00	0.41	0.02	0.05	99.56	
	<i>Gon05230ph-g</i>	4.17	0.19	2.75	67.47	0.82	15.78	0.06	3.20	0.02	0.14	5.89	0.73	0.08	101.29	Fe-Ti mineral
	Gon05230ph-h	6.49	0.00	0.44	58.37	0.01	25.65	0.00	8.04	0.00	0.00	0.45	0.00	0.11	99.55	
	Gon05230ph-i	6.36	0.12	0.51	55.91	0.01	26.75	0.03	7.95	0.01	0.01	0.45	0.10	0.03	98.23	
	<i>Gon05230ph-j</i>	0.03	0.00	0.01	96.89	0.00	0.01	0.00	0.03	0.01	0.00	0.01	0.00	0.08	97.07	quartz
	Gon05230ph-k	6.01	0.00	0.48	56.80	0.02	26.97	0.00	8.47	0.00	0.01	0.41	0.02	0.00	99.19	
	Gon05230ph-l	6.43	0.00	0.56	59.84	0.05	25.76	0.00	6.99	0.02	0.02	0.40	0.03	0.00	100.10	
	Gon05230ph-m	6.32	0.00	0.46	55.44	0.01	27.67	0.00	8.61	0.01	0.00	0.38	0.02	0.11	99.03	
	<i>Gon05230ph-n</i>	6.17	0.00	0.44	56.37	0.02	23.27	0.00	7.70	0.00	0.00	0.36	0.06	0.00	94.39	low total
	Gon05230ph-o	6.13	0.08	0.51	59.01	0.01	26.40	0.02	8.01	0.00	0.00	0.33	0.00	0.05	100.55	
	<i>Gon05230ph-p</i>	5.25	0.08	0.31	54.52	0.06	28.67	0.00	10.12	0.01	0.00	0.39	0.02	0.00	99.42	high CaO
	Gon05230ph-q	5.54	0.11	0.38	58.12	0.03	27.43	0.00	9.48	0.01	0.00	0.46	0.04	0.04	101.62	
	<i>Gon05230ph-r</i>	5.18	0.00	0.27	54.51	0.05	28.32	0.00	10.62	0.01	0.00	0.46	0.08	0.10	99.58	high CaO
	Gon05230ph-s	6.69	0.00	0.51	56.66	0.02	26.14	0.01	7.67	0.01	0.04	0.33	0.01	0.10	98.19	
	Gon05230ph-t	6.19	0.08	0.50	58.49	0.01	26.16	0.00	7.77	0.00	0.03	0.32	0.03	0.00	99.58	
	<b>AVERAGE</b>	<b>6.32</b>	<b>0.03</b>	<b>0.49</b>	<b>57.93</b>	<b>0.02</b>	<b>26.59</b>	<b>0.01</b>	<b>7.99</b>	<b>0.01</b>	<b>0.01</b>	<b>0.39</b>	<b>0.04</b>	<b>0.05</b>	<b>99.90</b>	<b>HMDS Tuff</b>
	<b>σ</b>	<b>0.34</b>	<b>0.04</b>	<b>0.06</b>	<b>1.34</b>	<b>0.01</b>	<b>0.80</b>	<b>0.01</b>	<b>0.63</b>	<b>0.01</b>	<b>0.01</b>	<b>0.05</b>	<b>0.03</b>	<b>0.05</b>	<b>1.13</b>	
Gon05 231b	Gon05231b-a	1.90	0.00	2.83	71.83	0.03	11.75	0.06	0.53	0.03	0.08	2.05	0.24	0.06	91.38	
vitric ash	Gon05231b-b	2.69	0.11	3.07	72.86	0.01	11.61	0.01	0.48	0.03	0.10	1.79	0.19	0.00	92.93	
n=22	Gon05231b-c	2.43	0.10	2.95	74.04	0.01	11.51	0.04	0.41	0.05	0.05	1.72	0.15	0.00	93.45	
	Gon05231b-d	2.49	0.15	2.80	71.41	0.02	12.01	0.05	0.50	0.03	0.08	1.87	0.24	0.12	91.78	
	Gon05231b-e	2.51	0.13	3.09	72.52	0.01	11.87	0.05	0.47	0.04	0.11	1.91	0.20	0.00	92.91	
	Gon05231b-f	2.48	0.16	2.83	72.80	0.01	12.05	0.00	0.45	0.02	0.09	1.92	0.13	0.05	92.98	
	Gon05231b-g	2.52	0.11	2.83	73.11	0.00	11.24	0.00	0.45	0.04	0.06	1.85	0.11	0.02	92.32	
	Gon05231b-h	2.20	0.00	3.01	72.40	0.03	11.30	0.06	0.45	0.03	0.08	1.88	0.19	0.01	91.64	
	Gon05231b-ph1	2.81	0.16	3.15	72.58	0.01	11.99	0.08	0.47	0.03	0.09	1.82	0.21	0.11	93.49	
	Gon05231b-i	2.17	0.00	3.09	73.01	0.00	11.11	0.00	0.43	0.03	0.08	1.77	0.20	0.08	91.95	
	Gon05231b-ph2	2.20	0.03	2.76	73.15	0.00	12.02	0.03	0.49	0.04	0.06	1.77	0.17	0.00	92.72	

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
	Gon05231b-j	2.70	0.01	2.97	75.97	0.01	11.90	0.07	0.47	0.04	0.10	1.91	0.16	0.00	96.30	
	Gon05231b-k	2.38	0.16	2.86	74.52	0.02	11.94	0.04	0.43	0.05	0.08	1.70	0.11	0.00	94.28	
	Gon05231b-l	2.68	0.05	3.01	73.96	0.03	11.25	0.06	0.46	0.03	0.06	1.97	0.20	0.05	93.80	
	Gon05231b-m	2.62	0.00	2.77	73.65	0.00	11.67	0.02	0.45	0.03	0.08	1.91	0.21	0.16	93.58	
	Gon05231b-n	2.25	0.08	3.19	73.04	0.00	11.98	0.00	0.48	0.03	0.07	1.79	0.13	0.00	93.06	
	Gon05231b-o	2.00	0.00	2.71	72.21	0.06	11.82	0.06	0.46	0.05	0.03	1.89	0.14	0.02	91.44	
	Gon05231b-p	2.49	0.13	3.00	72.85	0.02	11.07	0.03	0.50	0.06	0.07	1.86	0.19	0.09	92.37	
	Gon05231b-q	2.80	0.26	3.06	74.26	0.00	11.88	0.02	0.48	0.03	0.11	1.80	0.15	0.17	95.02	
	Gon05231b-r	1.95	0.00	2.86	71.75	0.00	11.81	0.06	0.57	0.03	0.09	1.99	0.25	0.03	91.38	
	Gon05231b-s	2.11	0.06	2.99	74.51	0.03	11.59	0.03	0.41	0.05	0.04	1.86	0.20	0.04	93.90	
	Gon05231b-t	2.59	0.00	2.77	75.08	0.03	11.45	0.03	0.48	0.04	0.07	1.74	0.13	0.00	94.42	
	<b>AVERAGE</b>	<b>2.41</b>	<b>0.08</b>	<b>2.94</b>	<b>73.25</b>	<b>0.01</b>	<b>11.67</b>	<b>0.04</b>	<b>0.47</b>	<b>0.04</b>	<b>0.08</b>	<b>1.85</b>	<b>0.18</b>	<b>0.05</b>	<b>93.05</b>	<b>Sifi Tuff</b>
	<b>σ</b>	<b>0.27</b>	<b>0.07</b>	<b>0.14</b>	<b>1.14</b>	<b>0.01</b>	<b>0.32</b>	<b>0.02</b>	<b>0.04</b>	<b>0.01</b>	<b>0.02</b>	<b>0.09</b>	<b>0.04</b>	<b>0.05</b>	<b>1.27</b>	
Gon05 231c	<i>Gon05231c-a</i>	0.69	0.00	0.80	49.44	0.77	12.77	0.04	0.90	0.03	0.06	2.53	0.26	0.00	68.30	low total
vitric ash	Gon05231c-b	2.48	0.23	3.08	72.03	0.00	11.13	0.03	0.42	0.04	0.05	1.66	0.22	0.07	91.44	
n=16	Gon05231c-c	2.29	0.00	2.99	70.39	0.00	11.52	0.01	0.49	0.02	0.09	1.95	0.19	0.03	89.97	
	<i>Gon05231c-d</i>	0.83	0.11	1.23	59.27	1.21	15.14	0.07	0.95	0.04	0.03	3.03	0.28	0.00	82.18	low total
	Gon05231c-e	2.47	0.09	3.04	73.82	0.04	11.75	0.04	0.50	0.05	0.05	1.93	0.17	0.06	93.99	
	Gon05231c-f	2.37	0.11	3.08	73.36	0.00	11.55	0.07	0.48	0.03	0.06	1.84	0.15	0.06	93.15	
	Gon05231c-g	2.00	0.00	2.98	72.49	0.00	11.75	0.06	0.41	0.05	0.05	1.75	0.14	0.12	91.80	
	<i>Gon05231c-h</i>	7.19	0.00	4.27	65.68	0.01	20.69	0.00	1.10	0.00	0.03	0.21	0.00	0.62	99.82	feldspar
	Gon05231c-i	2.22	0.00	3.00	73.20	0.00	11.85	0.02	0.46	0.04	0.05	1.89	0.22	0.08	93.05	
	Gon05231c-j	2.16	0.00	2.98	73.10	0.01	11.70	0.00	0.49	0.03	0.07	1.98	0.12	0.06	92.68	
	Gon05231c-k	2.41	0.11	2.94	73.07	0.01	11.89	0.05	0.45	0.04	0.05	1.94	0.21	0.00	93.15	
	Gon05231c-l	1.91	0.08	3.16	72.88	0.03	11.94	0.01	0.44	0.04	0.05	1.91	0.22	0.02	92.69	
	Gon05231c-m	2.21	0.00	3.04	73.09	0.00	11.69	0.07	0.45	0.03	0.08	1.91	0.17	0.02	92.77	
	<i>Gon05231c-n</i>	0.01	0.00	0.01	2.55	0.00	0.02	0.00	0.01	0.17	0.00	0.03	0.00	0.09	2.91	low total
	Gon05231c-o	2.39	0.08	2.82	73.20	0.02	11.92	0.04	0.49	0.04	0.05	1.81	0.15	0.18	93.18	
	Gon05231c-p	2.54	0.05	2.83	72.05	0.03	11.93	0.05	0.44	0.04	0.05	1.80	0.18	0.00	91.97	
	Gon05231c-q	2.69	0.00	2.91	72.00	0.01	10.68	0.03	0.49	0.04	0.07	1.89	0.17	0.15	91.13	
	Gon05231c-r	2.18	0.16	2.94	74.86	0.01	11.66	0.05	0.44	0.03	0.06	1.68	0.16	0.00	94.23	
	Gon05231c-s	2.08	0.06	2.93	72.70	0.01	11.56	0.04	0.48	0.04	0.05	1.86	0.14	0.00	91.95	
	Gon05231c-t	2.21	0.03	2.99	72.85	0.00	11.60	0.04	0.45	0.04	0.07	1.85	0.14	0.02	92.27	
	<b>AVERAGE</b>	<b>2.29</b>	<b>0.06</b>	<b>2.98</b>	<b>72.82</b>	<b>0.01</b>	<b>11.63</b>	<b>0.04</b>	<b>0.46</b>	<b>0.04</b>	<b>0.06</b>	<b>1.85</b>	<b>0.17</b>	<b>0.05</b>	<b>92.46</b>	<b>Sifi Tuff</b>
	<b>σ</b>	<b>0.21</b>	<b>0.07</b>	<b>0.09</b>	<b>0.96</b>	<b>0.01</b>	<b>0.33</b>	<b>0.02</b>	<b>0.03</b>	<b>0.01</b>	<b>0.01</b>	<b>0.09</b>	<b>0.03</b>	<b>0.06</b>	<b>1.08</b>	
Gon05 231d	Gon05231d-a	2.28	0.10	3.09	74.13	0.00	11.93	0.03	0.48	0.03	0.08	1.87	0.16	0.00	94.18	
vitric ash	Gon05231d-b	2.20	0.16	2.82	73.31	0.03	11.38	0.07	0.45	0.04	0.06	2.00	0.24	0.04	92.78	
n=19	Gon05231d-c	2.03	0.00	2.94	72.84	0.01	11.58	0.02	0.47	0.03	0.07	1.93	0.17	0.20	92.28	
	Gon05231d-d	2.37	0.06	2.91	74.45	0.02	11.38	0.01	0.47	0.03	0.08	1.94	0.19	0.00	93.91	
	Gon05231d-e	2.43	0.01	2.67	75.78	0.01	11.74	0.10	0.51	0.05	0.05	1.87	0.20	0.12	95.54	
	Gon05231d-f	2.01	0.10	2.80	71.70	0.00	11.46	0.01	0.48	0.03	0.04	1.74	0.18	0.02	90.58	

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
	Gon05231d-g	1.92	0.00	2.57	73.64	0.01	12.05	0.05	0.55	0.03	0.05	2.07	0.13	0.06	93.14	
	Gon05231d-h	2.25	0.00	3.04	73.80	0.02	11.66	0.03	0.51	0.04	0.07	1.79	0.15	0.07	93.43	
	Gon05231d-i	2.65	0.13	3.04	72.62	0.02	11.46	0.01	0.48	0.04	0.07	1.85	0.21	0.07	92.65	
	Gon05231d-j	2.36	0.12	3.14	73.23	0.02	11.90	0.04	0.47	0.03	0.07	1.87	0.16	0.04	93.44	
	Gon05231d-k	2.38	0.07	2.94	73.53	0.00	11.42	0.02	0.40	0.03	0.08	1.79	0.09	0.00	92.74	
	Gon05231d-l	2.30	0.02	2.94	73.26	0.02	11.28	0.03	0.46	0.02	0.06	1.79	0.18	0.00	92.34	
	Gon05231d-m	2.51	0.03	2.93	73.36	0.00	11.61	0.05	0.42	0.04	0.07	1.89	0.15	0.03	93.08	
	Gon05231d-n	2.26	0.00	2.95	71.81	0.00	11.40	0.00	0.44	0.04	0.07	1.89	0.21	0.01	91.08	
	Gon05231d-o	2.00	0.18	2.90	73.35	0.02	11.86	0.12	0.50	0.05	0.07	1.91	0.21	0.08	93.22	
	Gon05231d-p	2.44	0.00	2.76	73.71	0.02	11.48	0.04	0.50	0.03	0.07	1.89	0.13	0.07	93.14	
	Gon05231d-r	2.32	0.02	2.98	73.58	0.00	11.84	0.00	0.43	0.04	0.08	1.94	0.21	0.11	93.54	
	Gon05231d-s	2.52	0.02	2.99	72.78	0.01	11.31	0.03	0.43	0.04	0.07	1.61	0.18	0.03	92.01	
	Gon05231d-t	2.12	0.08	2.97	73.65	0.01	11.80	0.02	0.43	0.02	0.06	1.76	0.15	0.00	93.07	
	<b>AVERAGE</b>	<b>2.28</b>	<b>0.06</b>	<b>2.91</b>	<b>73.39</b>	<b>0.01</b>	<b>11.61</b>	<b>0.03</b>	<b>0.47</b>	<b>0.03</b>	<b>0.07</b>	<b>1.86</b>	<b>0.17</b>	<b>0.05</b>	<b>92.96</b>	<b>Sifi Tuff</b>
	<b>σ</b>	<b>0.20</b>	<b>0.06</b>	<b>0.14</b>	<b>0.90</b>	<b>0.01</b>	<b>0.24</b>	<b>0.03</b>	<b>0.04</b>	<b>0.01</b>	<b>0.01</b>	<b>0.10</b>	<b>0.04</b>	<b>0.05</b>	<b>1.08</b>	
Gon05 233 feldspar n=18	Gon05233ph-a	8.56	0.00	0.57	62.71	0.01	23.56	0.00	5.01	0.01	0.00	0.25	0.00	0.17	100.86	
	Gon05233ph-b	7.28	0.03	0.49	58.73	0.00	23.35	0.01	5.85	0.01	0.00	0.22	0.00	0.30	96.28	
	Gon05233ph-c	8.52	0.02	0.70	63.88	0.00	20.48	0.00	3.11	0.01	0.00	0.19	0.00	0.20	97.14	
	Gon05233ph-d	0.08	0.02	0.04	96.95	0.00	0.28	0.00	0.02	0.00	0.02	0.03	0.00	0.01	97.46	quartz
	Gon05233ph-e	8.18	0.05	0.44	60.30	0.00	21.82	0.00	4.47	0.06	0.01	0.19	0.02	0.12	95.66	
	Gon05233ph-f	8.82	0.00	0.78	62.74	0.00	22.21	0.00	3.67	0.00	0.04	0.14	0.05	0.13	98.58	
	Gon05233ph-g	7.54	0.03	0.68	66.80	0.00	19.90	0.03	3.63	0.02	0.01	0.13	0.04	0.09	98.90	
	Gon05233ph-h	8.42	0.00	0.58	64.23	0.01	23.79	0.00	4.76	0.01	0.01	0.21	0.00	0.04	102.06	
	Gon05233ph-i	7.14	0.00	0.39	59.87	0.01	26.51	0.00	7.20	0.00	0.05	0.26	0.00	0.05	101.48	
	Gon05233ph-j	8.93	0.00	0.84	65.98	0.00	24.01	0.00	3.52	0.00	0.02	0.14	0.00	0.08	103.54	
	Gon05233ph-k	7.74	0.00	0.48	62.18	0.00	24.06	0.00	5.08	0.01	0.00	0.19	0.00	0.05	99.79	
	Gon05233ph-l	8.97	0.10	0.63	65.04	0.02	24.12	0.00	4.26	0.01	0.02	0.14	0.00	0.17	103.49	
	Gon05233ph-m	8.83	0.03	0.67	63.09	0.01	23.58	0.00	4.31	0.01	0.00	0.22	0.02	0.24	101.01	
	Gon05233ph-n	8.74	0.06	0.58	65.94	0.01	25.73	0.04	4.83	0.01	0.00	0.19	0.00	0.16	106.30	
	Gon05233ph-o	9.17	0.05	0.65	62.14	0.00	22.30	0.00	3.36	0.09	0.00	0.18	0.05	0.15	98.15	
	Gon05233ph-p	8.59	0.00	0.62	61.89	0.00	23.49	0.00	3.93	0.00	0.01	0.16	0.08	0.10	98.88	
	Gon05233ph-q	8.23	0.00	0.61	58.19	0.00	20.67	0.00	3.51	0.02	0.00	0.09	0.00	0.06	91.39	low total
	Gon05233ph-r	7.39	0.01	0.35	58.35	0.01	25.70	0.00	6.56	0.01	0.00	0.21	0.00	0.05	98.64	
	Gon05233ph-s	7.72	0.02	0.54	66.20	0.00	25.37	0.00	4.95	0.00	0.00	0.19	0.04	0.10	105.14	
	Gon05233ph-t	7.45	0.15	0.48	60.15	0.02	25.96	0.00	6.12	0.00	0.02	0.26	0.06	0.00	100.68	
	<b>AVERAGE</b>	<b>8.22</b>	<b>0.03</b>	<b>0.58</b>	<b>62.79</b>	<b>0.01</b>	<b>23.66</b>	<b>0.00</b>	<b>4.70</b>	<b>0.01</b>	<b>0.01</b>	<b>0.19</b>	<b>0.02</b>	<b>0.12</b>	<b>100.37</b>	<b>HMDS Tuff</b>
	<b>σ</b>	<b>0.67</b>	<b>0.04</b>	<b>0.13</b>	<b>2.61</b>	<b>0.01</b>	<b>1.83</b>	<b>0.01</b>	<b>1.14</b>	<b>0.02</b>	<b>0.01</b>	<b>0.04</b>	<b>0.03</b>	<b>0.08</b>	<b>2.95</b>	
Gon05 234b vitric ash n=15	Gon05234b-a	7.28	0.15	0.62	59.39	0.03	24.83	0.01	6.74	0.00	0.02	0.57	0.09	0.22	99.97	feldspar
	Gon05234b-b	2.56	0.08	2.99	71.35	0.02	12.00	0.06	0.46	0.04	0.07	1.88	0.11	0.00	91.61	
	Gon05234b-c	2.39	0.00	1.76	72.78	0.01	11.55	0.04	0.46	0.04	0.05	1.89	0.19	0.03	91.20	
	Gon05234b-d	2.56	0.00	2.91	71.66	0.08	10.99	0.05	0.55	0.01	0.07	2.15	0.25	0.00	91.28	

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
	Gon05234b-e	2.84	0.00	3.51	73.64	0.11	11.26	0.02	0.37	0.01	0.07	1.53	0.37	0.04	93.80	
	Gon05234b-f	5.44	0.00	0.49	54.74	0.08	26.77	0.01	9.83	0.00	0.01	0.61	0.12	0.00	98.09	feldspar
	Gon05234b-g	2.98	0.05	3.05	72.99	0.00	11.50	0.07	0.40	0.02	0.06	1.76	0.17	0.08	93.14	
	Gon05234b-h	2.58	0.00	2.75	70.96	0.03	11.62	0.08	0.84	0.02	0.04	2.37	0.28	0.00	91.55	high CaO
	Gon05234b-i	3.01	0.10	3.21	72.72	0.00	11.38	0.11	0.32	0.03	0.04	1.54	0.11	0.00	92.58	
	Gon05234b-j	2.37	0.00	2.61	72.43	0.02	11.81	0.08	0.56	0.03	0.07	2.12	0.22	0.01	92.33	
	Gon05234b-l	2.37	0.00	2.82	71.82	0.02	11.64	0.09	0.51	0.01	0.07	2.22	0.22	0.00	91.81	
	Gon05234b-m	2.60	0.10	2.86	72.31	0.01	11.50	0.07	0.45	0.04	0.06	1.82	0.10	0.00	91.92	
	Gon05234b-n	2.75	0.10	2.79	72.29	0.00	11.51	0.09	0.45	0.03	0.05	1.89	0.16	0.03	92.15	
	Gon05234b-o	2.93	0.13	2.90	72.74	0.00	11.62	0.02	0.44	0.04	0.07	1.99	0.18	0.17	93.24	
	Gon05234b-p	2.57	0.00	3.11	72.74	0.00	11.32	0.00	0.41	0.03	0.10	1.83	0.15	0.00	92.25	
	Gon05234b-r	3.14	0.00	3.08	73.21	0.01	11.60	0.01	0.48	0.04	0.06	1.92	0.23	0.09	93.87	
	Gon05234b-q	2.42	0.16	0.04	48.57	0.16	31.24	0.00	15.72	0.01	0.00	0.77	0.00	0.00	99.10	feldspar
	Gon05234b-s	2.72	0.10	3.92	73.03	0.06	11.25	0.09	0.44	0.02	0.07	1.73	0.26	0.05	93.76	
	Gon05234b-t	2.52	0.00	3.11	72.93	0.01	11.58	0.10	0.45	0.04	0.04	1.91	0.11	0.12	92.92	
	<b>AVERAGE</b>	<b>2.69</b>	<b>0.05</b>	<b>2.98</b>	<b>72.58</b>	<b>0.02</b>	<b>11.50</b>	<b>0.06</b>	<b>0.45</b>	<b>0.03</b>	<b>0.06</b>	<b>1.88</b>	<b>0.19</b>	<b>0.04</b>	<b>92.52</b>	<b>Sifi Tuff</b>
	<b>σ</b>	<b>0.25</b>	<b>0.05</b>	<b>0.46</b>	<b>0.61</b>	<b>0.03</b>	<b>0.24</b>	<b>0.03</b>	<b>0.06</b>	<b>0.01</b>	<b>0.02</b>	<b>0.20</b>	<b>0.07</b>	<b>0.05</b>	<b>0.90</b>	
Gon05 234c	Gon05234c-a	2.26	0.11	3.60	74.78	0.07	12.41	0.04	0.35	0.02	0.07	1.30	0.25	0.00	95.27	
vitric ash	Gon05234c-b	2.55	0.11	3.68	76.13	0.12	11.66	0.07	0.41	0.01	0.11	1.52	0.28	0.03	96.68	
n=8	Gon05234c-c	6.01	0.00	0.45	57.21	0.03	26.20	0.00	8.83	0.00	0.00	0.36	0.04	0.04	99.19	feldspar
	Gon05234c-d	0.56	0.00	0.02	50.01	12.06	4.33	0.00	19.56	0.01	0.19	7.77	1.05	0.00	95.56	feldspar
	Gon05234c-e	1.76	0.00	0.12	75.85	0.10	12.44	0.10	3.41	0.00	0.02	0.46	0.31	0.04	94.60	high CaO
	Gon05234c-f	4.62	0.25	0.43	55.26	0.10	26.75	0.00	10.83	0.01	0.00	0.66	0.18	0.11	99.19	feldspar
	Gon05234c-g	3.12	0.00	4.54	76.40	0.12	12.18	0.06	0.33	0.01	0.04	1.57	0.41	0.00	98.77	
	Gon05234c-h	6.08	0.08	0.24	54.65	0.04	27.95	0.00	9.82	0.00	0.00	0.36	0.08	0.04	99.35	feldspar
	Gon05234c-i	0.41	0.11	0.00	51.50	14.81	2.45	0.00	19.77	0.01	0.26	9.36	1.20	0.00	99.88	feldspar
	Gon05234c-j	4.39	0.02	0.49	53.33	0.09	26.30	0.00	11.34	0.02	0.00	0.68	0.09	0.00	96.76	feldspar
	Gon05234c-k	8.03	0.21	2.85	64.94	0.03	22.27	0.01	2.43	0.00	0.00	0.50	0.05	0.37	101.68	feldspar
	Gon05234c-l	2.73	0.00	3.97	77.53	0.08	12.09	0.04	0.50	0.03	0.09	1.75	0.23	0.19	99.23	
	Gon05234c-m	2.56	0.00	4.35	76.19	0.06	12.52	0.07	0.41	0.03	0.06	1.68	0.21	0.13	98.27	
	Gon05234c-n	2.30	0.00	3.35	75.33	0.07	12.01	0.04	0.37	0.02	0.08	1.51	0.24	0.04	95.37	
	Gon05234c-o	6.89	0.00	0.93	60.50	0.00	24.22	0.02	6.07	0.00	0.02	0.49	0.08	0.13	99.37	feldspar
	Gon05234c-p	4.98	0.03	0.50	56.42	0.10	29.15	0.00	10.95	0.01	0.00	0.49	0.15	0.09	102.88	feldspar
	Gon05234c-q	4.52	0.00	0.61	53.25	0.07	28.33	0.00	11.43	0.00	0.02	0.57	0.18	0.04	99.03	feldspar
	Gon05234c-r	6.69	0.00	0.31	59.29	0.04	27.15	0.00	8.36	0.00	0.00	0.37	0.06	0.09	102.35	feldspar
	Gon05234c-s	2.52	0.24	4.16	74.90	0.15	12.27	0.04	0.47	0.01	0.09	1.56	0.36	0.08	96.86	
	Gon05234c-t	5.48	0.00	1.02	56.94	0.07	28.10	0.00	9.51	0.01	0.00	0.49	0.11	0.13	101.86	feldspar
	Gon05234c-ph1	2.84	0.03	4.57	75.78	0.08	11.97	0.12	0.50	0.02	0.09	1.67	0.22	0.06	97.96	
	<b>AVERAGE</b>	<b>2.61</b>	<b>0.06</b>	<b>4.03</b>	<b>75.88</b>	<b>0.09</b>	<b>12.14</b>	<b>0.06</b>	<b>0.42</b>	<b>0.02</b>	<b>0.08</b>	<b>1.57</b>	<b>0.28</b>	<b>0.07</b>	<b>97.30</b>	<b>Sifi Tuff</b>
	<b>σ</b>	<b>0.28</b>	<b>0.09</b>	<b>0.45</b>	<b>0.90</b>	<b>0.03</b>	<b>0.27</b>	<b>0.03</b>	<b>0.07</b>	<b>0.01</b>	<b>0.02</b>	<b>0.14</b>	<b>0.07</b>	<b>0.07</b>	<b>1.50</b>	

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
Gon05 236a feldspar n=13	Gon05236aph-a	1.88	0.00	0.06	47.84	0.14	30.14	0.00	15.38	0.01	0.04	0.67	0.02	0.00	96.18	
	Gon05236aph-b	1.93	0.02	0.04	50.62	0.21	34.04	0.00	16.03	0.00	0.01	0.58	0.02	0.00	103.49	
	Gon05236aph-c	1.98	0.00	0.03	48.70	0.13	34.11	0.00	16.54	0.01	0.01	0.66	0.08	0.02	102.28	
	Gon05236aph-d	2.07	0.00	0.01	49.52	0.14	33.04	0.00	16.31	0.00	0.02	0.54	0.00	0.00	101.65	
	Gon05236aph-e	4.97	0.00	0.24	53.13	0.03	29.59	0.00	11.24	0.01	0.01	0.51	0.03	0.04	99.80	low CaO
	Gon05236aph-f	2.10	0.00	0.01	46.27	0.13	31.76	0.00	16.56	0.00	0.00	0.72	0.04	0.00	97.60	
	Gon05236aph-g	2.23	0.00	0.00	43.85	0.09	28.64	0.00	16.45	0.00	0.01	0.74	0.02	0.00	92.04	low total
	Gon05236aph-h	2.49	0.00	0.04	48.94	0.16	30.93	0.00	15.23	0.01	0.00	0.76	0.09	0.07	98.73	
	Gon05236aph-i	3.10	0.00	0.05	46.70	0.17	28.31	0.03	14.48	0.00	0.01	0.74	0.01	0.06	93.67	low total
	Gon05236aph-j	1.60	0.06	0.01	44.34	0.12	30.50	0.03	16.57	0.06	0.00	0.44	0.01	0.01	93.75	low total
	Gon05236aph-k	5.63	0.04	0.32	57.46	0.04	24.90	0.00	8.17	0.01	0.00	0.41	0.03	0.01	97.02	low CaO
	Gon05236aph-l	5.73	0.20	0.37	54.99	0.04	27.12	0.01	9.35	0.01	0.02	0.48	0.03	0.00	98.35	low CaO
	Gon05236aph-m	2.11	0.00	0.04	47.58	0.14	32.80	0.00	16.50	0.00	0.00	0.67	0.02	0.00	99.86	
	Gon05236aph-n	6.15	0.00	0.44	57.88	0.04	25.83	0.00	8.52	0.00	0.00	0.49	0.00	0.09	99.43	low CaO
	Gon05236aph-o	1.88	0.21	0.07	46.68	0.19	33.11	0.01	16.58	0.00	0.00	0.59	0.06	0.01	99.39	
	Gon05236aph-p	1.83	0.22	0.02	49.51	0.19	34.29	0.00	16.47	0.00	0.01	0.68	0.03	0.16	103.42	
	Gon05236aph-q	1.92	0.00	0.01	45.34	0.16	31.08	0.00	16.07	0.02	0.03	0.55	0.00	0.00	95.19	
	Gon05236aph-r	2.16	0.00	0.07	48.23	0.14	33.76	0.00	15.94	0.01	0.00	0.76	0.08	0.00	101.16	
	Gon05236aph-s	2.27	0.11	0.07	49.06	0.14	29.98	0.00	14.67	0.10	0.00	0.62	0.10	0.01	97.13	
	Gon05236aph-t	1.98	0.00	0.03	46.55	0.12	32.09	0.00	16.04	0.00	0.00	0.64	0.06	0.00	97.50	
	<b>AVERAGE</b>	<b>2.05</b>	<b>0.04</b>	<b>0.04</b>	<b>48.06</b>	<b>0.15</b>	<b>32.40</b>	<b>0.00</b>	<b>16.02</b>	<b>0.01</b>	<b>0.01</b>	<b>0.65</b>	<b>0.05</b>	<b>0.02</b>	<b>99.50</b>	<b>HMDS Tuff</b>
	<b>σ</b>	<b>0.18</b>	<b>0.08</b>	<b>0.02</b>	<b>1.53</b>	<b>0.03</b>	<b>1.51</b>	<b>0.00</b>	<b>0.60</b>	<b>0.03</b>	<b>0.01</b>	<b>0.07</b>	<b>0.03</b>	<b>0.05</b>	<b>2.74</b>	
Gon05 236b feldspar n=18	Gon05236bph-a	2.41	0.00	0.07	48.80	0.18	29.59	0.01	13.84	0.10	0.00	0.60	0.03	0.18	95.81	
	Gon05236bph-b	1.94	0.00	0.01	44.57	0.11	32.40	0.00	16.70	0.01	0.00	0.76	0.04	0.00	96.52	
	Gon05236bph-c	2.49	0.06	0.07	48.72	0.14	30.80	0.00	15.10	0.01	0.00	0.63	0.00	0.00	98.01	
	Gon05236bph-d	2.29	0.09	0.03	36.83	0.10	25.81	0.00	15.22	0.00	0.02	0.66	0.08	0.04	81.18	low total
	Gon05236bph-e	3.40	0.13	0.10	51.59	0.12	26.71	0.00	12.65	0.00	0.00	0.74	0.07	0.00	95.52	
	Gon05236bph-f	3.98	0.03	0.03	72.74	0.01	10.54	0.00	2.06	0.00	0.00	0.02	0.00	0.00	89.41	low total
	Gon05236bph-g	2.26	0.00	0.06	49.92	0.16	28.48	0.00	13.87	0.01	0.00	0.57	0.04	0.04	95.41	
	Gon05236bph-h	2.59	0.00	0.05	51.24	0.15	27.96	0.00	13.67	0.05	0.03	0.62	0.03	0.00	96.38	
	Gon05236bph-i	2.18	0.08	0.13	48.35	0.16	31.09	0.00	15.04	0.01	0.00	0.68	0.03	0.02	97.77	
	Gon05236bph-j	2.93	0.05	0.05	50.07	0.17	29.38	0.00	13.68	0.01	0.00	0.68	0.07	0.09	97.19	
	Gon05236bph-k	2.85	0.00	0.22	52.34	0.15	27.90	0.00	12.71	0.12	0.00	0.60	0.05	0.00	96.96	
	Gon05236bph-m	2.20	0.09	0.13	46.83	0.16	30.22	0.00	15.30	0.02	0.04	0.65	0.11	0.00	95.76	
	Gon05236bph-n	2.11	0.06	0.01	46.82	0.14	32.43	0.00	16.16	0.00	0.00	0.61	0.04	0.13	98.51	
	Gon05236bph-o	2.55	0.00	0.07	46.99	0.13	29.46	0.03	15.20	0.01	0.01	0.66	0.08	0.04	95.23	
	Gon05236bph-p	2.44	0.00	0.16	49.97	0.13	31.49	0.00	14.85	0.05	0.00	0.64	0.09	0.00	99.84	
	Gon05236bph-q	2.50	0.11	0.04	51.32	0.16	31.32	0.00	14.76	0.00	0.00	0.68	0.06	0.00	100.95	
	Gon05236bph-r	2.03	0.00	0.03	46.16	0.15	31.81	0.00	16.29	0.00	0.02	0.73	0.07	0.00	97.29	
Gon05236bph-s	3.83	0.00	0.16	52.50	0.13	30.50	0.00	13.18	0.00	0.00	0.77	0.07	0.00	101.14		
Gon05236bph-t	3.16	0.16	0.03	50.74	0.16	31.27	0.00	14.32	0.02	0.00	0.66	0.07	0.00	100.59		
Gon05236bph-u	2.33	0.00	0.09	48.87	0.13	30.95	0.00	15.95	0.00	0.00	0.69	0.00	0.00	99.02		

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)														Comments
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO	Total	
	<b>AVERAGE</b>	<b>2.57</b>	<b>0.04</b>	<b>0.08</b>	<b>49.21</b>	<b>0.15</b>	<b>30.21</b>	<b>0.00</b>	<b>14.63</b>	<b>0.02</b>	<b>0.01</b>	<b>0.67</b>	<b>0.05</b>	<b>0.03</b>	<b>97.66</b>	<b>HMDS Tuff</b>
	<b>σ</b>	<b>0.50</b>	<b>0.05</b>	<b>0.06</b>	<b>2.27</b>	<b>0.02</b>	<b>1.63</b>	<b>0.01</b>	<b>1.22</b>	<b>0.03</b>	<b>0.01</b>	<b>0.06</b>	<b>0.03</b>	<b>0.05</b>	<b>1.96</b>	
Gon05 238	Gon05238-a	2.15	0.07	2.90	73.01	0.01	12.10	0.07	0.56	0.03	0.10	2.02	0.12	0.06	93.21	
vitric ash	Gon05238-b	2.19	0.08	2.96	74.98	0.00	11.69	0.07	0.38	0.04	0.09	1.77	0.16	0.05	94.45	
n=20	Gon05238-c	1.84	0.06	2.67	73.56	0.01	11.76	0.00	0.45	0.04	0.08	1.87	0.25	0.00	92.59	
	Gon05238-d	1.99	0.08	2.76	72.07	0.02	11.91	0.03	0.54	0.03	0.08	2.00	0.27	0.00	91.79	
	Gon05238-e	1.87	0.02	2.77	72.91	0.01	12.14	0.06	0.53	0.04	0.10	2.05	0.21	0.09	92.81	
	Gon05238-f	1.88	0.00	2.92	70.68	0.02	11.50	0.04	0.47	0.03	0.09	1.88	0.19	0.02	89.73	
	Gon05238-g	2.06	0.11	2.85	71.66	0.01	11.40	0.04	0.39	0.02	0.05	1.78	0.15	0.08	90.59	
	Gon05238-h	1.97	0.00	2.86	73.30	0.01	12.14	0.06	0.51	0.03	0.06	2.02	0.14	0.06	93.16	
	Gon05238-i	1.90	0.00	2.76	73.86	0.01	12.28	0.05	0.52	0.04	0.10	2.06	0.19	0.00	93.77	
	Gon05238-j	1.77	0.00	2.88	73.39	0.01	12.02	0.05	0.50	0.03	0.08	2.05	0.17	0.05	93.00	
	Gon05238-k	1.86	0.00	2.77	72.09	0.00	12.26	0.04	0.54	0.03	0.09	2.07	0.20	0.00	91.96	
	Gon05238-l	1.99	0.00	2.69	72.71	0.00	12.24	0.00	0.52	0.03	0.08	2.11	0.21	0.11	92.70	
	Gon05238-m	1.88	0.24	2.75	74.22	0.01	11.62	0.01	0.44	0.02	0.06	1.67	0.14	0.11	93.18	
	Gon05238-n	1.97	0.00	2.92	70.32	0.00	11.93	0.07	0.53	0.04	0.09	2.04	0.23	0.05	90.20	
	Gon05238-o	2.01	0.02	2.82	73.04	0.01	11.58	0.07	0.45	0.03	0.09	1.86	0.16	0.21	92.35	
	Gon05238-p	1.97	0.00	2.68	73.75	0.01	11.65	0.04	0.48	0.05	0.09	1.76	0.21	0.00	92.68	
	Gon05238-q	1.99	0.00	2.93	71.05	0.01	11.72	0.05	0.47	0.04	0.05	1.87	0.14	0.08	90.42	
	Gon05238-r	1.85	0.00	2.79	73.02	0.03	11.90	0.10	0.53	0.03	0.10	2.06	0.21	0.00	92.62	
	Gon05238-s	1.93	0.00	2.75	72.10	0.01	11.90	0.04	0.49	0.04	0.10	1.86	0.20	0.05	91.48	
	Gon05238-t	2.19	0.00	2.94	73.31	0.02	11.93	0.05	0.56	0.04	0.09	2.01	0.17	0.00	93.31	
	<b>AVERAGE</b>	<b>1.96</b>	<b>0.03</b>	<b>2.82</b>	<b>72.75</b>	<b>0.01</b>	<b>11.88</b>	<b>0.05</b>	<b>0.49</b>	<b>0.03</b>	<b>0.08</b>	<b>1.94</b>	<b>0.19</b>	<b>0.05</b>	<b>92.30</b>	<b>Sifi Tuff</b>
	<b>σ</b>	<b>0.12</b>	<b>0.06</b>	<b>0.09</b>	<b>1.19</b>	<b>0.01</b>	<b>0.26</b>	<b>0.02</b>	<b>0.05</b>	<b>0.01</b>	<b>0.02</b>	<b>0.13</b>	<b>0.04</b>	<b>0.05</b>	<b>1.25</b>	
Gon05 239	Gon05239ph-a	6.59	0.11	0.31	57.75	0.03	29.67	0.01	9.00	0.01	0.00	0.35	0.02	0.00	103.85	
feldspar	Gon05239ph-b	5.80	0.00	0.26	54.37	0.04	26.05	0.01	8.78	0.02	0.00	0.33	0.01	0.04	95.71	
n=17	Gon05239ph-c	5.68	0.00	0.31	52.64	0.01	25.21	0.00	8.91	0.01	0.00	0.26	0.06	0.00	93.10	low total
	Gon05239ph-d	5.64	0.05	0.22	55.23	0.03	26.60	0.00	9.61	0.00	0.00	0.36	0.05	0.00	97.79	
	Gon05239ph-e	4.18	0.05	0.20	63.55	0.01	11.30	0.00	6.18	0.00	0.00	0.20	0.03	0.05	85.75	low total
	Gon05239ph-f	7.51	0.00	1.21	67.22	0.00	21.26	0.00	2.85	0.00	0.01	0.15	0.00	0.09	100.29	low CaO
	Gon05239ph-g	5.90	0.08	0.27	56.43	0.03	26.95	0.00	8.97	0.00	0.00	0.32	0.09	0.09	99.13	
	Gon05239ph-h	5.62	0.00	0.31	57.74	0.04	27.19	0.00	8.96	0.04	0.00	0.29	0.02	0.00	100.20	
	Gon05239ph-i	5.47	0.00	0.35	58.30	0.03	25.71	0.00	8.69	0.02	0.03	0.33	0.02	0.03	98.98	
	Gon05239ph-j	5.81	0.00	0.25	57.70	0.03	27.33	0.00	9.15	0.01	0.05	0.32	0.05	0.14	100.83	
	Gon05239ph-k	6.04	0.05	0.27	57.70	0.05	25.37	0.00	8.47	0.01	0.01	0.36	0.06	0.10	98.50	
	Gon05239ph-l	6.20	0.00	0.28	58.53	0.04	27.57	0.00	9.43	0.00	0.00	0.30	0.04	0.00	102.38	
	Gon05239ph-m	6.59	0.00	0.32	56.83	0.04	27.49	0.00	8.44	0.00	0.00	0.33	0.09	0.15	100.29	
	Gon05239ph-n	6.41	0.00	0.37	55.34	0.04	26.70	0.00	8.28	0.01	0.00	0.33	0.02	0.08	97.59	
	Gon05239ph-o	5.13	0.00	0.20	57.86	0.04	26.01	0.00	8.68	0.01	0.00	0.29	0.07	0.10	98.39	
	Gon05239ph-p	6.02	0.03	0.28	55.11	0.05	27.66	0.00	8.94	0.01	0.03	0.28	0.09	0.01	98.49	
	Gon05239ph-q	7.27	0.10	0.35	59.29	0.01	27.12	0.00	8.04	0.00	0.00	0.29	0.08	0.00	102.54	

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments		
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total	
	<i>Gon05239ph-r</i>	5.76	0.00	0.31	54.70	0.04	25.25	0.00	8.29	0.02	0.00	0.26	0.04	0.04	94.71	low total	
	<i>Gon05239ph-s</i>	6.04	0.00	0.27	57.52	0.06	26.71	0.00	8.55	0.00	0.00	0.30	0.05	0.06	99.56		
	<i>Gon05239ph-t</i>	5.68	0.00	0.27	56.15	0.07	27.82	0.00	9.53	0.01	0.01	0.30	0.08	0.00	99.93		
	<i>Gon05239ph-u</i>	5.62	0.00	0.26	55.34	0.04	26.45	0.00	9.51	0.00	0.00	0.29	0.06	0.03	97.59		
	<b>AVERAGE</b>	<b>5.99</b>	<b>0.02</b>	<b>0.28</b>	<b>56.89</b>	<b>0.04</b>	<b>26.96</b>	<b>0.00</b>	<b>8.88</b>	<b>0.01</b>	<b>0.01</b>	<b>0.32</b>	<b>0.05</b>	<b>0.05</b>	<b>99.51</b>	<b>HMDS Tuff</b>	
	<b>σ</b>	<b>0.51</b>	<b>0.04</b>	<b>0.04</b>	<b>1.42</b>	<b>0.01</b>	<b>0.99</b>	<b>0.00</b>	<b>0.46</b>	<b>0.01</b>	<b>0.01</b>	<b>0.03</b>	<b>0.03</b>	<b>0.05</b>	<b>2.06</b>		
Gon05 241	Gon05241-a	4.39	0.00	0.17	50.67	0.07	29.61	0.00	12.84	0.01	0.03	0.90	0.10	0.01	98.80	feldspar n=13	
	Gon05241-b	3.92	0.00	0.15	51.53	0.11	29.24	0.00	12.68	0.01	0.00	0.84	0.00	0.00	98.49		
	Gon05241-c	4.26	0.10	0.11	51.44	0.09	30.45	0.00	12.97	0.00	0.05	0.98	0.16	0.00	100.63		
	<i>Gon05241-d</i>	5.74	0.00	0.25	56.41	0.05	27.19	0.00	9.53	0.00	0.01	0.82	0.09	0.00	100.09		low CaO
	Gon05241-e	4.14	0.00	0.11	53.05	0.17	29.69	0.00	12.67	0.01	0.00	0.82	0.10	0.00	100.76		
	<i>Gon05241-f</i>	0.32	0.00	0.03	49.49	14.37	3.89	0.00	18.40	0.01	0.23	8.63	1.23	0.00	96.59		Fe-Mg-Ti mineral
	Gon05241-g	5.03	0.00	0.21	53.57	0.09	29.30	0.00	11.46	0.01	0.01	0.85	0.10	0.01	100.64		
	Gon05241-h	4.56	0.00	0.15	54.34	0.09	29.89	0.00	12.45	0.00	0.00	0.70	0.13	0.00	102.32		
	Gon05241-i	3.93	0.00	0.15	50.99	0.21	29.36	0.01	12.85	0.00	0.01	0.70	0.11	0.00	98.33		
	Gon05241-j	4.86	0.00	0.20	55.78	0.05	29.80	0.01	10.87	0.00	0.03	0.91	0.14	0.00	102.66		
	<i>Gon05241-k</i>	2.07	0.00	0.07	42.40	0.13	29.47	0.02	16.25	0.00	0.00	0.80	0.05	0.07	91.34		low total
	Gon05241-l	3.74	0.00	0.13	50.89	0.18	30.56	0.01	13.35	0.00	0.00	0.82	0.15	0.00	99.83		
	Gon05241-m	4.23	0.13	0.17	50.44	0.06	28.15	0.00	10.98	0.13	0.02	0.78	0.04	0.00	95.13		
	Gon05241-n	4.10	0.02	0.18	50.51	0.13	29.66	0.00	12.95	0.01	0.00	0.75	0.05	0.00	98.36		
	<i>Gon05241-o</i>	0.26	0.01	0.00	51.43	15.78	2.18	0.00	19.39	0.01	0.27	9.16	0.00	0.14	98.63	Fe-Mg mineral	
	<i>Gon05241-p</i>	0.32	0.16	0.00	49.34	15.37	4.48	0.03	19.41	0.00	0.22	7.94	1.08	0.00	98.36	Fe-Mg-Ti mineral	
	<i>Gon05241-q</i>	1.49	0.00	0.06	45.71	0.08	34.30	0.00	17.58	0.00	0.03	0.53	0.04	0.01	99.85	low FeO	
	Gon05241-r	4.47	0.00	0.76	52.42	0.09	30.33	0.00	12.74	0.01	0.00	0.87	0.05	0.00	101.76		
	<i>Gon05241-s</i>	3.97	0.19	0.10	47.21	0.18	26.93	0.01	13.04	0.00	0.01	0.76	0.10	0.03	92.54	low total	
	Gon05241-t	3.74	0.05	0.17	49.82	0.19	28.23	0.01	13.08	0.01	0.01	0.81	0.04	0.00	96.18		
	<b>AVERAGE</b>	<b>4.26</b>	<b>0.02</b>	<b>0.20</b>	<b>51.96</b>	<b>0.12</b>	<b>29.56</b>	<b>0.00</b>	<b>12.45</b>	<b>0.02</b>	<b>0.01</b>	<b>0.82</b>	<b>0.09</b>	<b>0.00</b>	<b>99.53</b>		
	<b>σ</b>	<b>0.40</b>	<b>0.04</b>	<b>0.17</b>	<b>1.77</b>	<b>0.05</b>	<b>0.74</b>	<b>0.01</b>	<b>0.81</b>	<b>0.03</b>	<b>0.02</b>	<b>0.08</b>	<b>0.05</b>	<b>0.00</b>	<b>2.26</b>		
Gon05 243	Gon05243-a	2.44	0.00	1.65	71.18	0.01	12.03	0.06	0.47	0.03	0.09	1.97	0.21	0.00	90.12	vitric ash n=19	
	Gon05243-b	2.68	0.00	1.72	72.07	0.01	11.91	0.02	0.42	0.03	0.07	1.80	0.21	0.00	90.95		
	Gon05243-c	2.53	0.19	1.77	71.72	0.00	11.98	0.06	0.55	0.03	0.06	2.00	0.19	0.03	91.12		
	Gon05243-d	2.67	0.13	1.87	71.39	0.01	11.77	0.07	0.52	0.04	0.09	2.07	0.17	0.06	90.86		
	<i>Gon05243-e</i>	8.00	0.11	0.89	66.99	0.00	24.17	0.00	4.56	0.01	0.00	0.23	0.00	0.15	105.13		feldspar
	Gon05243-f	2.79	0.00	1.98	72.39	0.02	11.88	0.03	0.52	0.02	0.07	2.06	0.14	0.15	92.08		
	Gon05243-g	2.56	0.00	1.70	72.06	0.01	11.25	0.01	0.40	0.04	0.07	1.71	0.19	0.11	90.10		
	Gon05243-h	3.11	0.00	1.85	73.12	0.01	11.85	0.07	0.45	0.04	0.05	1.76	0.09	0.07	92.48		
	Gon05243-i	2.82	0.00	1.72	73.32	0.02	12.22	0.04	0.53	0.03	0.08	2.08	0.22	0.00	93.07		
	Gon05243-j	2.50	0.00	1.89	72.05	0.01	11.88	0.02	0.55	0.03	0.10	1.99	0.21	0.06	91.30		
	Gon05243-k	2.61	0.13	1.68	71.39	0.00	12.06	0.04	0.52	0.04	0.06	2.10	0.24	0.07	90.93		
	Gon05243-l	2.55	0.00	1.78	71.28	0.00	11.40	0.04	0.40	0.03	0.07	1.85	0.22	0.07	89.69		
	Gon05243-m	2.51	0.13	1.76	72.95	0.01	11.94	0.06	0.56	0.03	0.07	2.08	0.22	0.03	92.36		



DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
	Gon05243-n	3.00	0.03	1.79	75.01	0.02	12.45	0.00	0.45	0.04	0.05	1.83	0.19	0.03	94.90	
	Gon05243-o	2.60	0.05	2.03	71.89	0.00	12.12	0.07	0.51	0.03	0.06	1.95	0.21	0.06	91.59	
	Gon05243-p	2.64	0.00	2.04	71.50	0.00	12.04	0.06	0.47	0.03	0.08	1.78	0.13	0.00	90.77	
	Gon05243-q	2.89	0.10	1.90	72.26	0.01	11.95	0.04	0.48	0.04	0.12	2.10	0.21	0.02	92.11	
	Gon05243-r	2.86	0.00	1.77	72.48	0.01	11.80	0.07	0.44	0.04	0.08	1.78	0.23	0.15	91.72	
	Gon05243-s	2.64	0.10	1.90	72.99	0.00	11.92	0.08	0.48	0.03	0.07	1.93	0.16	0.07	92.37	
	Gon05243-t	2.58	0.00	1.74	71.32	0.00	11.82	0.06	0.45	0.04	0.06	1.74	0.17	0.00	89.98	
	<i>Gon05243-ph1</i>	8.66	0.00	3.80	65.05	0.00	20.52	0.00	0.42	0.00	0.01	0.56	0.02	0.84	99.88	feldspar
	<b>AVERAGE</b>	<b>2.68</b>	<b>0.05</b>	<b>1.82</b>	<b>72.23</b>	<b>0.01</b>	<b>11.91</b>	<b>0.05</b>	<b>0.48</b>	<b>0.03</b>	<b>0.07</b>	<b>1.93</b>	<b>0.19</b>	<b>0.05</b>	<b>91.50</b>	<b>Sifi Tuff</b>
	<b>σ</b>	<b>0.18</b>	<b>0.06</b>	<b>0.12</b>	<b>0.95</b>	<b>0.01</b>	<b>0.26</b>	<b>0.02</b>	<b>0.05</b>	<b>0.01</b>	<b>0.02</b>	<b>0.14</b>	<b>0.04</b>	<b>0.05</b>	<b>1.26</b>	
Gon05 244	Gon05244ph-a	3.81	0.00	0.15	53.27	0.12	27.96	0.03	12.43	0.02	0.01	0.63	0.12	0.03	98.57	
feldspar	Gon05244ph-b	3.96	0.00	0.15	52.90	0.14	31.21	0.00	12.69	0.01	0.00	0.69	0.16	0.07	101.99	
n=10	Gon05244ph-c	3.86	0.00	0.15	52.12	0.17	30.17	0.00	12.69	0.00	0.01	0.69	0.09	0.00	99.96	
	<i>Gon05244ph-d</i>	3.71	0.00	0.20	44.52	0.09	24.68	0.00	12.60	0.00	0.00	0.65	0.07	0.00	86.52	low total
	Gon05244ph-e	3.30	0.00	0.16	52.49	0.14	28.58	0.00	12.71	0.01	0.00	0.67	0.07	0.00	98.13	
	Gon05244ph-e	3.56	0.00	0.10	52.35	0.17	30.41	0.00	13.28	0.00	0.03	0.79	0.04	0.04	100.77	
	Gon05244ph-f	3.86	0.00	0.16	53.56	0.11	25.37	0.00	11.42	0.00	0.00	0.61	0.12	0.00	95.23	
	Gon05244ph-h	3.61	0.00	0.07	54.20	0.15	28.44	0.00	13.44	0.01	0.02	0.63	0.02	0.03	100.62	
	Gon05244ph-i	4.30	0.18	0.18	54.31	0.15	29.51	0.00	12.28	0.02	0.01	0.71	0.15	0.02	101.80	
	Gon05244ph-j	4.24	0.00	0.14	53.15	0.15	32.01	0.00	12.51	0.01	0.01	0.67	0.07	0.02	102.98	
	Gon05244ph-g	3.88	0.00	0.15	49.75	0.16	28.52	0.00	13.03	0.00	0.03	0.63	0.06	0.02	96.23	
	<b>AVERAGE</b>	<b>3.84</b>	<b>0.02</b>	<b>0.14</b>	<b>52.81</b>	<b>0.15</b>	<b>29.22</b>	<b>0.00</b>	<b>12.65</b>	<b>0.01</b>	<b>0.01</b>	<b>0.67</b>	<b>0.09</b>	<b>0.02</b>	<b>99.63</b>	<b>HMDS Tuff</b>
	<b>σ</b>	<b>0.30</b>	<b>0.06</b>	<b>0.03</b>	<b>1.30</b>	<b>0.02</b>	<b>1.89</b>	<b>0.01</b>	<b>0.57</b>	<b>0.01</b>	<b>0.01</b>	<b>0.05</b>	<b>0.05</b>	<b>0.02</b>	<b>2.54</b>	
Gon05 246	Gon05246ph-a	5.82	0.08	0.26	56.19	0.03	27.30	0.00	9.36	0.00	0.00	0.30	0.00	0.09	99.44	
feldspar	Gon05246ph-b	6.30	0.14	0.34	59.85	0.02	27.99	0.00	8.36	0.00	0.00	0.41	0.00	0.02	103.42	
n=15	Gon05246ph-c	6.13	0.00	0.26	58.58	0.04	27.70	0.00	9.05	0.00	0.00	0.36	0.05	0.03	102.20	
	Gon05246ph-d	5.41	0.05	0.26	53.84	0.04	27.20	0.02	9.94	0.00	0.00	0.35	0.03	0.09	97.24	
	Gon05246ph-e	5.42	0.13	0.26	56.82	0.02	25.49	0.00	9.43	0.01	0.03	0.33	0.08	0.00	98.02	
	Gon05246ph-f	5.61	0.00	0.24	52.79	0.02	27.16	0.02	9.18	0.00	0.00	0.36	0.06	0.00	95.44	
	Gon05246ph-g	6.28	0.00	0.32	56.65	0.04	27.84	0.00	8.84	0.00	0.00	0.38	0.10	0.05	100.50	
	<i>Gon05246ph-h</i>	5.86	0.00	0.42	54.78	0.03	22.79	0.00	7.24	0.00	0.00	0.50	0.04	0.00	91.66	low total
	Gon05246ph-i	6.73	0.08	0.40	59.35	0.03	26.08	0.00	7.53	0.01	0.00	0.49	0.08	0.00	100.78	
	<i>Gon05246ph-j</i>	9.32	0.02	0.90	62.40	0.01	22.21	0.00	2.74	0.01	0.00	0.19	0.02	0.17	98.00	low CaO
	Gon05246ph-k	6.46	0.11	0.31	61.24	0.04	27.28	0.00	8.03	0.00	0.05	0.29	0.08	0.03	103.94	
	Gon05246ph-l	6.18	0.14	0.25	60.42	0.03	29.33	0.00	8.54	0.01	0.04	0.37	0.09	0.00	105.39	
	<i>Gon05246ph-m</i>	5.65	0.00	0.21	51.09	0.01	26.76	0.00	9.64	0.00	0.00	0.38	0.02	0.11	93.89	low total
	<i>Gon05246ph-n</i>	8.22	0.00	0.85	61.68	0.00	23.51	0.00	3.53	0.01	0.00	0.13	0.05	0.18	98.17	low CaO
	Gon05246ph-o	5.77	0.05	0.21	56.93	0.02	27.47	0.00	9.22	0.01	0.02	0.34	0.00	0.07	100.11	
	Gon05246ph-p	6.19	0.00	0.29	59.57	0.02	27.91	0.01	8.77	0.00	0.00	0.33	0.00	0.02	103.11	
	Gon05246ph-q	6.23	0.00	0.26	58.36	0.02	27.69	0.00	8.88	0.00	0.02	0.30	0.02	0.06	101.84	
	<i>Gon05246ph-r</i>	8.86	0.00	0.99	65.54	0.00	23.24	0.00	3.36	0.00	0.01	0.11	0.00	0.09	102.19	low CaO

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
	Gon05246ph-s	5.43	0.02	0.22	56.46	0.05	28.02	0.01	9.35	0.01	0.02	0.36	0.05	0.00	100.00	
	Gon05246ph-t	5.77	0.00	0.29	55.62	0.04	27.82	0.00	9.10	0.02	0.00	0.32	0.02	0.02	99.03	
	<b>AVERAGE</b>	<b>5.98</b>	<b>0.05</b>	<b>0.28</b>	<b>57.51</b>	<b>0.03</b>	<b>27.49</b>	<b>0.00</b>	<b>8.90</b>	<b>0.01</b>	<b>0.01</b>	<b>0.35</b>	<b>0.04</b>	<b>0.03</b>	<b>100.70</b>	<b>HMDS Tuff</b>
	<b>σ</b>	<b>0.41</b>	<b>0.06</b>	<b>0.05</b>	<b>2.41</b>	<b>0.01</b>	<b>0.87</b>	<b>0.01</b>	<b>0.60</b>	<b>0.01</b>	<b>0.02</b>	<b>0.05</b>	<b>0.04</b>	<b>0.03</b>	<b>2.69</b>	
Gon05 248 feldspar n=15	Gon05248ph-a	6.35	0.00	0.27	57.02	0.04	28.16	0.01	8.88	0.01	0.00	0.32	0.02	0.09	101.17	
	Gon05248ph-b	5.54	0.00	0.22	61.15	0.02	27.98	0.00	8.60	0.02	0.02	0.34	0.01	0.00	103.90	
	Gon05248ph-c	5.59	0.09	0.29	57.42	0.00	26.52	0.00	9.03	0.00	0.00	0.33	0.06	0.00	99.32	
	Gon05248ph-d	5.42	0.00	0.30	58.81	0.01	27.58	0.01	8.66	0.00	0.00	0.33	0.00	0.00	101.13	
	Gon05248ph-e	5.54	0.00	0.28	55.79	0.03	26.06	0.00	8.74	0.01	0.00	0.25	0.04	0.00	96.75	
	Gon05248ph-f	5.22	0.00	0.23	60.20	0.04	26.09	0.01	8.50	0.01	0.00	0.36	0.06	0.05	100.77	
	Gon05248ph-g	5.21	0.00	0.26	55.74	0.02	24.58	0.04	8.91	0.02	0.00	0.37	0.00	0.00	95.15	
	Gon05248ph-h	6.98	0.03	0.39	58.66	0.03	26.20	0.00	7.34	0.01	0.00	0.34	0.07	0.06	100.12	
	Gon05248ph-i	6.29	0.00	0.29	55.28	0.02	26.84	0.00	8.89	0.00	0.04	0.39	0.05	0.04	98.14	
	Gon05248ph-j	5.86	0.00	0.28	57.09	0.03	27.87	0.04	9.36	0.00	0.01	0.27	0.07	0.00	100.88	
	Gon05248ph-k	5.99	0.03	0.27	52.43	0.02	26.16	0.00	8.56	0.00	0.02	0.34	0.04	0.00	93.86	low total
	Gon05248ph-l	9.13	0.00	0.77	66.89	0.01	22.23	0.00	3.55	0.01	0.02	0.20	0.04	0.17	103.02	low CaO
	Gon05248ph-m	5.89	0.00	0.27	58.38	0.02	26.99	0.00	9.02	0.01	0.00	0.32	0.03	0.00	100.95	
	Gon05248ph-n	6.58	0.09	0.24	60.67	0.04	27.54	0.00	8.81	0.01	0.00	0.31	0.07	0.09	104.45	
	Gon05248ph-o	5.78	0.08	0.32	56.44	0.03	24.96	0.00	8.90	0.00	0.00	0.32	0.05	0.00	96.88	
	Gon05248ph-p	7.03	0.00	0.38	56.26	0.01	23.16	0.01	7.30	0.01	0.00	0.21	0.08	0.09	94.55	low total
	Gon05248ph-q	5.93	0.06	0.30	53.39	0.03	23.59	0.00	8.36	0.00	0.00	0.37	0.02	0.14	92.19	low total
	Gon05248ph-r	7.57	0.06	0.41	57.09	0.01	22.28	0.00	6.68	0.00	0.00	0.23	0.00	0.17	94.50	low total
	Gon05248ph-s	6.54	0.00	0.30	56.98	0.01	25.88	0.01	8.17	0.00	0.00	0.28	0.05	0.00	98.22	
	Gon05248ph-t	6.31	0.00	0.33	55.94	0.01	26.44	0.01	8.94	0.00	0.03	0.31	0.04	0.00	98.37	
	<b>AVERAGE</b>	<b>5.94</b>	<b>0.02</b>	<b>0.28</b>	<b>57.70</b>	<b>0.02</b>	<b>26.65</b>	<b>0.01</b>	<b>8.72</b>	<b>0.01</b>	<b>0.01</b>	<b>0.32</b>	<b>0.04</b>	<b>0.02</b>	<b>99.75</b>	<b>HMDS Tuff</b>
	<b>σ</b>	<b>0.54</b>	<b>0.03</b>	<b>0.04</b>	<b>1.87</b>	<b>0.01</b>	<b>1.07</b>	<b>0.01</b>	<b>0.47</b>	<b>0.01</b>	<b>0.01</b>	<b>0.04</b>	<b>0.02</b>	<b>0.04</b>	<b>2.57</b>	
Gon05 251a vitric ash n=20	Gon05251a-a	1.38	0.01	2.66	73.61	0.01	12.14	0.10	0.55	0.03	0.09	2.16	0.24	0.12	93.09	
	Gon05251a-b	1.11	0.02	2.67	72.92	0.02	11.81	0.04	0.54	0.03	0.10	1.97	0.24	0.12	91.60	
	Gon05251a-c	1.28	0.00	2.72	73.42	0.01	12.09	0.04	0.47	0.03	0.09	1.95	0.13	0.12	92.35	
	Gon05251a-d	1.23	0.05	2.72	72.58	0.00	11.94	0.03	0.49	0.03	0.07	1.97	0.18	0.06	91.35	
	Gon05251a-e	1.28	0.00	2.57	72.68	0.01	12.20	0.04	0.59	0.02	0.05	2.02	0.26	0.08	91.81	
	Gon05251a-f	1.21	0.00	2.74	74.16	0.01	11.81	0.06	0.48	0.03	0.10	1.94	0.22	0.00	92.76	
	Gon05251a-g	1.17	0.00	3.06	74.05	0.01	11.63	0.05	0.41	0.04	0.09	1.74	0.11	0.00	92.35	
	Gon05251a-h	1.33	0.00	2.76	73.58	0.01	11.87	0.02	0.45	0.04	0.08	2.02	0.23	0.00	92.38	
	Gon05251a-i	1.45	0.00	2.62	74.40	0.02	11.98	0.05	0.47	0.04	0.07	1.96	0.20	0.20	93.46	
	Gon05251a-j	1.18	0.03	2.51	73.48	0.01	12.16	0.08	0.52	0.02	0.12	2.08	0.19	0.03	92.44	
	Gon05251a-k	1.41	0.00	2.66	74.73	0.00	11.94	0.07	0.45	0.02	0.09	1.92	0.21	0.00	93.51	
	Gon05251a-l	1.28	0.11	2.57	73.79	0.01	12.23	0.09	0.54	0.03	0.12	1.99	0.24	0.08	93.10	
	Gon05251a-m	0.94	0.03	2.53	72.71	0.01	11.92	0.06	0.56	0.03	0.09	2.00	0.19	0.00	91.07	
	Gon05251a-n	1.30	0.00	2.93	73.94	0.00	11.67	0.00	0.40	0.04	0.06	1.75	0.14	0.06	92.28	
	Gon05251a-o	1.29	0.00	2.74	72.71	0.01	12.15	0.04	0.57	0.04	0.07	0.05	0.14	0.02	89.81	low FeO

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
	Gon05251a-p	1.24	0.10	2.91	73.54	0.01	11.73	0.04	0.42	0.04	0.10	1.74	0.14	0.00	92.02	
	Gon05251a-q	1.16	0.00	2.67	72.78	0.01	11.79	0.02	0.45	0.02	0.06	1.73	0.16	0.00	90.85	
	Gon05251a-r	1.18	0.00	2.72	73.14	0.00	11.90	0.06	0.47	0.02	0.09	1.99	0.17	0.00	91.74	
	Gon05251a-s	1.10	0.00	2.71	73.57	0.01	12.13	0.06	0.55	0.03	0.15	2.13	0.14	0.07	92.65	
	Gon05251a-t	1.18	0.00	2.92	72.96	0.01	11.91	0.05	0.49	0.04	0.07	1.86	0.17	0.06	91.70	
	Gon05251a-u	1.11	0.03	2.70	72.34	0.02	12.01	0.07	0.50	0.02	0.09	2.08	0.23	0.16	91.37	
	<b>AVERAGE</b>	<b>1.23</b>	<b>0.02</b>	<b>2.72</b>	<b>73.42</b>	<b>0.01</b>	<b>11.94</b>	<b>0.05</b>	<b>0.49</b>	<b>0.03</b>	<b>0.09</b>	<b>1.95</b>	<b>0.19</b>	<b>0.06</b>	<b>92.19</b>	<b>Sifi Tuff</b>
	<b>σ</b>	<b>0.12</b>	<b>0.03</b>	<b>0.14</b>	<b>0.63</b>	<b>0.01</b>	<b>0.17</b>	<b>0.02</b>	<b>0.05</b>	<b>0.01</b>	<b>0.02</b>	<b>0.12</b>	<b>0.04</b>	<b>0.06</b>	<b>0.74</b>	
Gon05 251b	Gon05251b-a	1.38	0.03	2.23	74.09	0.02	11.95	0.03	0.50	0.02	0.08	2.00	0.23	0.00	92.54	
vitric ash	Gon05251b-b	1.30	0.00	2.71	73.48	0.01	11.96	0.05	0.45	0.03	0.07	1.80	0.18	0.00	92.04	
n=19	Gon05251b-c	1.28	0.00	2.29	74.89	0.01	12.23	0.06	0.56	0.02	0.12	2.18	0.17	0.11	93.92	
	<i>Gon05251b-d</i>	<i>8.33</i>	<i>0.03</i>	<i>3.26</i>	<i>65.16</i>	<i>0.00</i>	<i>20.90</i>	<i>0.00</i>	<i>1.56</i>	<i>0.00</i>	<i>0.03</i>	<i>0.28</i>	<i>0.00</i>	<i>0.61</i>	<i>100.17</i>	feldspar
	Gon05251b-e	1.31	0.03	2.36	74.71	0.01	12.18	0.03	0.49	0.03	0.07	1.99	0.21	0.06	93.48	
	Gon05251b-f	1.54	0.00	2.12	74.01	0.01	12.23	0.07	0.58	0.03	0.07	2.06	0.27	0.02	93.01	
	Gon05251b-g	1.12	0.00	2.13	73.72	0.01	11.87	0.04	0.47	0.03	0.07	1.93	0.17	0.02	91.60	
	Gon05251b-h	1.19	0.03	2.43	74.09	0.01	11.89	0.07	0.49	0.04	0.03	2.12	0.17	0.02	92.59	
	Gon05251b-i	1.26	0.05	2.46	72.77	0.03	12.02	0.04	0.50	0.04	0.07	1.95	0.17	0.04	91.41	
	Gon05251b-j	1.20	0.01	2.66	73.61	0.01	12.02	0.01	0.49	0.03	0.10	2.07	0.13	0.07	92.41	
	Gon05251b-k	1.49	0.00	2.09	74.73	0.01	12.01	0.01	0.41	0.04	0.05	1.74	0.18	0.04	92.80	
	Gon05251b-l	1.40	0.00	2.14	73.35	0.01	12.22	0.03	0.55	0.03	0.11	2.16	0.23	0.08	92.32	
	Gon05251b-m	1.22	0.00	2.19	72.14	0.01	12.22	0.01	0.56	0.02	0.11	2.10	0.22	0.11	90.91	
	Gon05251b-n	1.37	0.08	2.18	73.52	0.01	12.04	0.08	0.47	0.04	0.09	2.00	0.14	0.09	92.12	
	<i>Gon05251b-o</i>	<i>0.11</i>	<i>0.00</i>	<i>0.06</i>	<i>95.46</i>	<i>0.02</i>	<i>0.85</i>	<i>0.02</i>	<i>0.13</i>	<i>0.00</i>	<i>0.00</i>	<i>0.29</i>	<i>0.00</i>	<i>0.00</i>	<i>96.95</i>	quartz
	Gon05251b-p	1.13	0.00	1.89	73.50	0.02	11.72	0.01	0.51	0.04	0.07	1.85	0.12	0.03	90.90	
	Gon05251b-q	1.11	0.10	2.18	72.78	0.00	11.46	0.00	0.42	0.03	0.04	1.84	0.12	0.12	90.21	
	Gon05251b-r	1.49	0.03	2.16	73.49	0.01	12.24	0.06	0.49	0.03	0.07	2.02	0.20	0.02	92.31	
	Gon05251b-s	1.55	0.00	2.19	74.68	0.01	12.02	0.02	0.48	0.02	0.09	1.88	0.25	0.02	93.22	
	Gon05251b-t	1.16	0.07	2.35	73.25	0.01	11.83	0.03	0.45	0.02	0.07	1.97	0.18	0.07	91.47	
	Gon05251b-u	1.52	0.18	2.11	74.19	0.00	11.99	0.03	0.49	0.03	0.07	1.91	0.05	0.19	92.79	
	<b>AVERAGE</b>	<b>1.32</b>	<b>0.03</b>	<b>2.26</b>	<b>73.74</b>	<b>0.01</b>	<b>12.01</b>	<b>0.04</b>	<b>0.49</b>	<b>0.03</b>	<b>0.08</b>	<b>1.98</b>	<b>0.18</b>	<b>0.06</b>	<b>92.21</b>	<b>Sifi Tuff</b>
	<b>σ</b>	<b>0.15</b>	<b>0.05</b>	<b>0.20</b>	<b>0.73</b>	<b>0.01</b>	<b>0.20</b>	<b>0.02</b>	<b>0.05</b>	<b>0.01</b>	<b>0.02</b>	<b>0.12</b>	<b>0.05</b>	<b>0.05</b>	<b>0.95</b>	
Gon05 253	Gon05253ph-b	1.95	0.00	0.03	45.21	0.18	31.54	0.00	16.51	0.01	0.03	0.61	0.01	0.01	96.08	
feldspar	<i>Gon05253ph-c</i>	<i>2.16</i>	<i>0.06</i>	<i>0.05</i>	<i>45.07</i>	<i>0.15</i>	<i>29.06</i>	<i>0.00</i>	<i>15.94</i>	<i>0.00</i>	<i>0.01</i>	<i>0.58</i>	<i>0.04</i>	<i>0.00</i>	<i>93.14</i>	low total
n=13	Gon05253ph-d	2.19	0.15	0.03	46.37	0.16	30.65	0.00	16.20	0.00	0.00	0.63	0.06	0.10	96.53	
	<i>Gon05253ph-e</i>	<i>2.26</i>	<i>0.00</i>	<i>0.05</i>	<i>44.12</i>	<i>0.14</i>	<i>29.95</i>	<i>0.00</i>	<i>16.01</i>	<i>0.00</i>	<i>0.04</i>	<i>0.65</i>	<i>0.07</i>	<i>0.00</i>	<i>93.29</i>	low total
	Gon05253ph-f	2.46	0.00	0.04	47.16	0.16	29.53	0.00	15.34	0.00	0.00	0.64	0.02	0.00	95.37	
	Gon05253ph-g	2.02	0.00	0.05	45.61	0.15	31.06	0.00	16.78	0.00	0.01	0.62	0.06	0.00	96.37	
	Gon05253ph-h	2.43	0.08	0.04	46.21	0.15	30.52	0.00	16.30	0.00	0.00	0.58	0.05	0.02	96.38	
	Gon05253ph-i	2.68	0.06	0.07	47.46	0.19	30.23	0.00	15.69	0.00	0.00	0.62	0.09	0.00	97.09	
	<i>Gon05253ph-j</i>	<i>2.06</i>	<i>0.09</i>	<i>0.02</i>	<i>42.95</i>	<i>0.15</i>	<i>29.90</i>	<i>0.00</i>	<i>16.41</i>	<i>0.01</i>	<i>0.00</i>	<i>0.60</i>	<i>0.05</i>	<i>0.03</i>	<i>92.28</i>	low total
	<i>Gon05253ph-k</i>	<i>2.33</i>	<i>0.02</i>	<i>0.03</i>	<i>45.67</i>	<i>0.17</i>	<i>30.02</i>	<i>0.00</i>	<i>15.85</i>	<i>0.01</i>	<i>0.00</i>	<i>0.64</i>	<i>0.08</i>	<i>0.12</i>	<i>94.95</i>	low total

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
	Gon05253ph-l	2.36	0.10	0.04	46.48	0.17	30.31	0.00	16.11	0.00	0.00	0.60	0.01	0.05	96.25	
	Gon05253ph-m	2.21	0.06	0.05	46.45	0.18	30.96	0.01	16.24	0.00	0.00	0.68	0.06	0.00	96.92	
	Gon05253ph-o	2.44	0.23	0.06	44.79	0.18	30.23	0.00	15.90	0.00	0.01	0.66	0.00	0.00	94.52	low total
	Gon05253ph-p	2.23	0.17	0.08	46.20	0.17	30.72	0.00	16.33	0.00	0.02	0.61	0.04	0.00	96.58	
	Gon05253ph-q	1.54	0.00	0.03	44.42	0.14	31.60	0.00	17.38	0.00	0.00	0.58	0.03	0.06	95.78	
	Gon05253ph-r	2.10	0.06	0.07	45.46	0.16	29.73	0.00	16.06	0.00	0.01	0.63	0.04	0.00	94.34	low total
	Gon05253ph-s	2.57	0.00	0.07	46.55	0.16	29.77	0.00	15.35	0.01	0.00	0.54	0.07	0.00	95.09	
	Gon05253ph-t	2.07	0.00	0.05	45.72	0.16	31.37	0.00	16.60	0.00	0.00	0.66	0.04	0.00	96.68	
	Gon05253ph-u	1.92	0.14	0.06	44.60	0.13	30.76	0.00	16.79	0.01	0.00	0.57	0.07	0.00	95.04	
	<b>AVERAGE</b>	<b>2.20</b>	<b>0.06</b>	<b>0.05</b>	<b>46.03</b>	<b>0.16</b>	<b>30.69</b>	<b>0.00</b>	<b>16.28</b>	<b>0.00</b>	<b>0.01</b>	<b>0.61</b>	<b>0.05</b>	<b>0.02</b>	<b>96.17</b>	
	<b>σ</b>	<b>0.31</b>	<b>0.06</b>	<b>0.02</b>	<b>0.90</b>	<b>0.02</b>	<b>0.63</b>	<b>0.00</b>	<b>0.58</b>	<b>0.00</b>	<b>0.01</b>	<b>0.04</b>	<b>0.02</b>	<b>0.03</b>	<b>0.66</b>	
Gon05 257a	Gon05257a-a'	1.41	0.00	1.70	70.63	0.02	11.66	0.09	0.63	0.07	0.12	2.61	0.23	0.16	89.32	
vitric ash	Gon05257a-A	2.86	0.03	1.81	73.45	0.02	12.71	0.12	0.65	0.06	0.08	2.29	0.24	0.03	94.35	
n=40	Gon05257a-b	2.91	0.16	1.74	73.57	0.01	12.01	0.07	0.58	0.07	0.13	2.38	0.13	0.18	93.93	
	Gon05257a-c	2.52	0.00	1.85	79.37	0.02	12.21	0.09	0.61	0.06	0.07	2.43	0.20	0.00	99.43	
	Gon05257a-d	2.64	0.05	1.84	71.98	0.01	12.05	0.08	0.63	0.05	0.09	2.46	0.23	0.02	92.13	
	Gon05257a-e	2.62	0.03	1.80	71.20	0.00	12.08	0.07	0.63	0.06	0.10	2.31	0.18	0.11	91.19	
	Gon05257a-f	3.09	0.10	1.74	71.69	0.01	12.38	0.08	0.61	0.05	0.09	2.48	0.20	0.10	92.63	
	Gon05257a-g	2.43	0.00	1.71	71.59	0.01	12.34	0.04	0.63	0.07	0.09	2.64	0.20	0.15	91.90	
	Gon05257a-h	2.57	0.00	1.73	70.65	0.00	12.20	0.14	0.65	0.06	0.10	2.58	0.22	0.04	90.93	
	Gon05257a-i	2.66	0.02	1.67	73.26	0.03	12.49	0.07	0.64	0.07	0.09	2.50	0.16	0.00	93.67	
	Gon05257a-j	2.35	0.00	1.75	6.06	0.03	13.94	0.10	0.62	0.06	0.10	2.35	0.22	0.00	27.57	low total
	Gon05257a-k	2.64	0.00	1.78	72.80	0.03	12.30	0.07	0.66	0.07	0.08	2.54	0.20	0.01	93.17	
	Gon05257a-l	2.83	0.06	1.80	71.23	0.00	13.15	0.07	0.60	0.06	0.08	2.30	0.12	0.12	92.42	
	Gon05257a-m	2.93	0.00	1.84	72.79	0.00	11.65	0.03	0.64	0.07	0.11	2.38	0.24	0.12	92.81	
	Gon05257a-n	2.53	0.00	1.77	69.94	0.00	11.44	0.05	0.61	0.05	0.10	2.48	0.22	0.12	89.32	
	Gon05257a-o	2.95	0.00	1.63	74.48	0.02	12.12	0.10	0.61	0.05	0.09	2.37	0.21	0.14	94.76	
	Gon05257a-p	2.88	0.00	1.70	72.90	0.00	11.61	0.10	0.59	0.07	0.11	2.40	0.28	0.04	92.67	
	Gon05257a-q	2.85	0.16	1.54	72.55	0.02	12.43	0.09	0.63	0.05	0.12	2.46	0.27	0.01	93.17	
	Gon05257a-r	2.92	0.18	1.73	72.49	0.00	12.04	0.03	0.60	0.07	0.12	2.43	0.11	0.14	92.85	
	Gon05257a-s	2.44	0.00	1.74	71.05	0.02	12.00	0.06	0.59	0.05	0.11	2.30	0.17	0.09	90.61	
	Gon05257a-t	2.58	0.00	1.73	71.79	0.01	10.52	0.05	0.59	0.06	0.12	2.47	0.26	0.00	90.18	
	Gon05257a-a	3.04	0.00	1.81	72.18	0.01	11.97	0.08	0.60	0.06	0.07	2.39	0.26	0.19	92.66	
	Gon05257a-b	8.94	0.00	2.07	65.41	0.00	21.06	0.00	1.87	0.00	0.00	0.27	0.00	0.38	100.00	feldspar
	Gon05257a-c	2.86	0.00	1.55	72.61	0.00	11.99	0.06	0.62	0.07	0.07	2.41	0.18	0.09	92.53	
	Gon05257a-d	3.17	0.00	1.66	71.40	0.01	11.87	0.13	0.62	0.06	0.12	2.43	0.19	0.19	91.84	
	Gon05257a-e	3.09	0.03	1.88	72.36	0.01	11.95	0.08	0.61	0.05	0.08	2.39	0.17	0.02	92.71	
	Gon05257a-f	3.07	0.12	1.95	72.51	0.01	11.97	0.07	0.60	0.05	0.11	2.38	0.21	0.11	93.16	
	Gon05257a-g	3.03	0.00	1.64	72.39	0.01	12.09	0.09	0.62	0.06	0.08	2.40	0.12	0.10	92.61	
	Gon05257a-h	2.75	0.00	1.86	71.58	0.00	11.89	0.07	0.60	0.05	0.06	2.40	0.26	0.16	91.66	
	Gon05257a-i	3.02	0.03	1.70	72.10	0.00	12.23	0.06	0.59	0.04	0.08	2.52	0.20	0.00	92.57	
	Gon05257a-j	3.10	0.11	1.84	71.29	0.00	11.80	0.04	0.60	0.06	0.12	2.44	0.22	0.01	91.63	

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
	Gon05257a-k	3.05	0.11	1.79	72.54	0.00	11.84	0.03	0.62	0.06	0.07	2.37	0.10	0.07	92.65	
	Gon05257a-l	3.01	0.08	1.70	71.13	0.02	11.85	0.08	0.62	0.06	0.13	2.42	0.19	0.10	91.37	
	Gon05257a-m	2.93	0.00	1.79	71.16	0.00	11.96	0.01	0.61	0.06	0.11	2.46	0.22	0.00	91.33	
	Gon05257a-n	3.16	0.03	1.83	72.18	0.01	11.88	0.10	0.62	0.06	0.10	2.57	0.16	0.02	92.71	
	Gon05257a-o	2.87	0.08	1.67	71.28	0.01	12.01	0.09	0.60	0.06	0.09	2.42	0.19	0.04	91.41	
	Gon05257a-p	2.92	0.00	1.71	72.05	0.00	11.79	0.07	0.61	0.06	0.11	2.51	0.25	0.00	92.07	
	Gon05257a-q	3.05	0.09	1.64	72.49	0.00	12.15	0.07	0.63	0.03	0.14	2.42	0.31	0.19	93.22	
	Gon05257a-r	3.13	0.00	1.68	71.93	0.02	11.70	0.10	0.60	0.05	0.12	2.41	0.13	0.10	91.97	
	Gon05257a-s	3.29	0.03	1.80	72.60	0.00	11.95	0.08	0.54	0.06	0.08	2.30	0.28	0.10	93.12	
	Gon05257a-t	3.24	0.05	1.83	72.39	0.01	12.02	0.08	0.60	0.06	0.09	2.35	0.16	0.10	92.97	
	Gon05257a-u	3.16	0.00	1.72	72.36	0.00	12.13	0.07	0.62	0.06	0.09	2.44	0.16	0.00	92.79	
	<b>AVERAGE</b>	<b>2.86</b>	<b>0.04</b>	<b>1.75</b>	<b>72.25</b>	<b>0.01</b>	<b>12.01</b>	<b>0.07</b>	<b>0.61</b>	<b>0.06</b>	<b>0.10</b>	<b>2.43</b>	<b>0.20</b>	<b>0.08</b>	<b>92.46</b>	<b>Kobo'o Tuff (Silicic A)</b>
	<b>σ</b>	<b>0.33</b>	<b>0.05</b>	<b>0.09</b>	<b>1.45</b>	<b>0.01</b>	<b>0.39</b>	<b>0.03</b>	<b>0.02</b>	<b>0.01</b>	<b>0.02</b>	<b>0.08</b>	<b>0.05</b>	<b>0.06</b>	<b>1.62</b>	
Gon05 257b	Gon05257b-a	2.59	0.00	1.62	72.44	0.02	12.02	0.06	0.63	0.06	0.09	2.57	0.25	0.09	92.43	
vitric ash	Gon05257b-b	2.44	0.00	1.61	72.85	0.02	12.36	0.04	0.64	0.05	0.00	2.42	0.20	0.15	92.77	
n=20	Gon05257b-c	2.50	0.00	1.58	72.51	0.00	12.38	0.11	0.64	0.06	0.12	2.42	0.23	0.02	92.56	
	Gon05257b-d	2.96	0.00	1.75	73.09	0.01	12.42	0.05	0.60	0.06	0.06	2.55	0.23	0.05	93.82	
	Gon05257b-e	2.83	0.18	1.77	73.62	0.01	11.49	0.06	0.62	0.06	0.11	2.42	0.21	0.02	93.39	
	Gon05257b-f	2.54	0.00	1.61	72.40	0.00	12.47	0.09	0.64	0.06	0.11	2.39	0.19	0.15	92.66	
	Gon05257b-g	2.68	0.00	1.54	72.74	0.01	12.29	0.05	0.64	0.05	0.10	2.46	0.21	0.09	92.87	
	Gon05257b-h	2.53	0.02	1.68	72.88	0.04	12.30	0.06	0.65	0.07	0.08	2.53	0.14	0.22	93.19	
	Gon05257b-i	2.48	0.00	1.88	72.58	0.01	12.02	0.05	0.63	0.06	0.09	2.31	0.31	0.16	92.58	
	Gon05257b-j	2.36	0.08	1.79	72.01	0.02	12.43	0.08	0.65	0.04	0.10	2.43	0.22	0.01	92.22	
	Gon05257b-k	2.43	0.00	1.76	71.46	0.02	12.06	0.10	0.63	0.06	0.12	2.44	0.24	0.11	91.43	
	Gon05257b-l	2.98	0.09	1.66	71.87	0.01	13.16	0.11	0.63	0.06	0.10	2.40	0.20	0.03	93.30	
	Gon05257b-m	2.78	0.00	1.83	73.65	0.00	12.24	0.02	0.64	0.07	0.13	2.38	0.18	0.00	93.91	
	Gon05257b-n	2.86	0.00	1.71	75.59	0.02	12.54	0.10	0.63	0.06	0.12	2.55	0.22	0.03	96.42	
	Gon05257b-o	2.49	0.04	1.66	72.87	0.00	11.77	0.09	0.59	0.04	0.09	2.42	0.27	0.16	92.50	
	Gon05257b-p	2.71	0.04	1.77	73.65	0.01	11.94	0.07	0.64	0.05	0.08	2.47	0.19	0.15	93.78	
	Gon05257b-q	2.47	0.02	1.78	74.04	0.00	12.02	0.08	0.65	0.05	0.11	2.47	0.29	0.00	93.99	
	Gon05257b-r	2.51	0.03	1.77	71.66	0.02	11.61	0.05	0.67	0.07	0.10	2.58	0.15	0.04	91.27	
	Gon05257b-s	2.49	0.00	1.62	72.14	0.03	11.42	0.05	0.65	0.30	0.08	2.37	0.18	0.02	91.34	
	Gon05257b-t	2.71	0.00	1.75	72.38	0.00	11.93	0.11	0.63	0.06	0.12	2.41	0.19	0.16	92.44	
	<b>AVERAGE</b>	<b>2.62</b>	<b>0.03</b>	<b>1.71</b>	<b>72.82</b>	<b>0.01</b>	<b>12.14</b>	<b>0.07</b>	<b>0.63</b>	<b>0.07</b>	<b>0.10</b>	<b>2.45</b>	<b>0.21</b>	<b>0.08</b>	<b>92.94</b>	<b>Kobo'o Tuff (Silicic A)</b>
	<b>σ</b>	<b>0.18</b>	<b>0.05</b>	<b>0.09</b>	<b>0.95</b>	<b>0.01</b>	<b>0.41</b>	<b>0.03</b>	<b>0.02</b>	<b>0.05</b>	<b>0.03</b>	<b>0.07</b>	<b>0.04</b>	<b>0.07</b>	<b>1.15</b>	
Gon05 258	Gon05258-a	2.30	0.00	2.11	72.58	0.01	12.23	0.07	0.60	0.05	0.07	2.41	0.20	0.10	92.72	
vitric ash	Gon05258-b	2.29	0.00	2.02	72.44	0.00	12.42	0.05	0.62	0.07	0.08	2.37	0.24	0.00	92.60	
n=17	Gon05258-c	2.09	0.02	1.91	69.77	0.01	12.21	0.11	0.69	0.05	0.09	2.56	0.31	0.00	89.81	
	Gon05258-d	2.29	0.15	1.99	69.78	0.00	11.89	0.04	0.62	0.05	0.08	2.44	0.22	0.08	89.62	
	Gon05258-e	2.23	0.08	1.97	71.12	0.01	12.13	0.09	0.59	0.06	0.09	2.47	0.23	0.08	91.14	
	Gon05258-f	2.10	0.00	2.01	69.47	0.01	12.14	0.07	0.61	0.06	0.09	2.49	0.25	0.00	89.31	

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
	Gon05258-g	2.14	0.00	2.13	71.48	0.01	12.35	0.09	0.63	0.06	0.07	2.43	0.21	0.06	91.66	
	Gon05258-h	2.33	0.03	2.05	71.58	0.01	12.13	0.07	0.61	0.05	0.11	2.41	0.19	0.12	91.69	
	Gon05258-i	2.46	0.05	2.03	70.37	0.01	12.11	0.05	0.60	0.07	0.10	2.32	0.20	0.08	90.45	
	Gon05258-j	2.07	0.21	1.97	71.67	0.01	12.36	0.10	0.59	0.06	0.13	2.24	0.21	0.08	91.69	
	Gon05258-k	2.17	0.10	2.04	71.62	0.00	12.57	0.04	0.63	0.05	0.09	2.43	0.20	0.09	92.05	
	Gon05258-l	2.24	0.05	1.86	70.87	0.01	11.50	0.07	0.62	0.05	0.11	2.34	0.26	0.00	89.98	
	Gon05258-m	2.38	0.00	2.00	72.93	0.00	12.74	0.05	0.60	0.06	0.13	2.34	0.27	0.04	93.53	
	Gon05258-n	2.16	0.01	1.95	72.35	0.01	12.26	0.06	0.66	0.06	0.10	2.44	0.31	0.06	92.43	
	Gon05258-o	2.31	0.01	1.92	69.20	0.00	12.15	0.03	0.65	0.05	0.12	2.33	0.22	0.13	89.13	
	Gon05258-p	2.05	0.00	1.81	70.79	0.00	12.01	0.06	0.63	0.06	0.10	2.37	0.24	0.02	90.14	
	Gon05258-q	2.19	0.08	1.85	65.93	0.00	11.14	0.06	0.64	0.06	0.06	2.29	0.27	0.12	84.70	low total
	Gon05258-r	1.94	0.00	1.91	66.80	0.00	11.75	0.06	0.64	0.06	0.11	2.31	0.27	0.03	85.87	low total
	Gon05258-s	2.10	0.09	2.14	70.62	0.01	12.48	0.10	0.60	0.05	0.10	2.37	0.14	0.15	90.96	
	Gon05258-t	2.12	0.00	1.88	66.34	0.03	11.82	0.09	0.61	0.06	0.07	2.31	0.16	0.08	85.58	low total
	<b>AVERAGE</b>	<b>2.22</b>	<b>0.05</b>	<b>1.99</b>	<b>71.10</b>	<b>0.01</b>	<b>12.21</b>	<b>0.07</b>	<b>0.62</b>	<b>0.06</b>	<b>0.10</b>	<b>2.40</b>	<b>0.23</b>	<b>0.06</b>	<b>91.11</b>	<b>Kobo'o Tuff (Silicic A)</b>
	<b>σ</b>	<b>0.12</b>	<b>0.06</b>	<b>0.09</b>	<b>1.13</b>	<b>0.00</b>	<b>0.28</b>	<b>0.02</b>	<b>0.03</b>	<b>0.01</b>	<b>0.02</b>	<b>0.08</b>	<b>0.04</b>	<b>0.05</b>	<b>1.32</b>	
Gon05 259a	Gon05259aph-a	6.50	0.00	0.49	57.66	0.02	25.46	0.00	8.12	0.00	0.01	0.40	0.00	0.00	98.66	
feldspar	Gon05259aph-b	6.88	0.08	0.00	57.97	0.02	25.07	0.00	7.83	0.01	0.00	0.52	0.00	0.08	98.47	
n=4	Gon05259aph-c	6.84	0.01	0.56	57.21	0.04	24.49	0.05	7.67	0.01	0.00	0.35	0.07	0.00	97.30	
	Gon05259aph-e	6.85	0.00	0.52	55.49	0.01	23.94	0.01	7.56	0.00	0.00	0.34	0.02	0.05	94.81	low total
	Gon05259aph-f	6.86	0.08	0.55	54.93	0.02	23.51	0.04	7.77	0.00	0.01	0.40	0.01	0.03	94.23	low total
	Gon05259aph-g	6.32	0.00	0.47	53.01	0.02	24.01	0.00	8.17	0.01	0.00	0.33	0.06	0.05	92.45	low total
	Gon05259aph-h	6.42	0.00	0.49	54.31	0.01	23.87	0.00	7.74	0.01	0.00	0.42	0.03	0.02	93.31	low total
	Gon05259aph-i	5.10	0.09	0.39	52.14	0.04	26.26	0.00	10.31	0.00	0.00	0.39	0.04	0.00	94.78	low total
	Gon05259aph-j	6.69	0.17	0.48	53.36	0.02	24.03	0.00	8.01	0.00	0.00	0.44	0.05	0.00	93.25	low total
	Gon05259aph-k	5.55	0.00	0.25	50.87	0.06	25.56	0.00	10.11	0.00	0.00	0.51	0.04	0.06	93.03	low total
	Gon05259aph-l	6.45	0.00	0.49	54.39	0.01	24.02	0.00	7.95	0.00	0.03	0.38	0.06	0.08	93.88	low total
	Gon05259aph-m	6.85	0.06	0.43	54.95	0.00	23.60	0.00	7.27	0.01	0.02	0.34	0.05	0.00	93.58	low total
	Gon05259aph-n	6.61	0.08	0.47	56.07	0.02	24.11	0.01	7.39	0.00	0.01	0.40	0.02	0.09	95.29	
	Gon05259aph-o	6.61	0.00	0.54	55.67	0.02	23.83	0.01	7.60	0.00	0.02	0.35	0.00	0.04	94.71	low total
	Gon05259aph-p	5.84	0.01	0.48	51.43	0.05	24.47	0.00	9.30	0.00	0.02	0.44	0.05	0.08	92.18	low total
	Gon05259aph-q	7.23	0.00	0.57	54.07	0.02	22.87	0.02	6.74	0.01	0.03	0.32	0.04	0.00	91.92	low total
	Gon05259aph-r	6.86	0.09	0.49	53.86	0.03	23.66	0.00	7.87	0.00	0.02	0.43	0.00	0.08	93.40	low total
	Gon05259aph-s	5.83	0.03	0.41	52.35	0.03	24.40	0.00	8.79	0.00	0.00	0.37	0.02	0.00	92.23	low total
	Gon05259aph-t	6.41	0.00	0.44	53.11	0.04	23.78	0.01	7.93	0.01	0.02	0.37	0.00	0.01	92.13	low total
	Gon05259aph-u	6.44	0.25	0.54	50.87	0.03	22.53	0.00	7.61	0.01	0.02	0.45	0.05	0.08	88.86	low total
	<b>AVERAGE</b>	<b>6.71</b>	<b>0.04</b>	<b>0.38</b>	<b>57.23</b>	<b>0.03</b>	<b>24.78</b>	<b>0.02</b>	<b>7.75</b>	<b>0.00</b>	<b>0.01</b>	<b>0.42</b>	<b>0.02</b>	<b>0.04</b>	<b>97.43</b>	
	<b>σ</b>	<b>0.18</b>	<b>0.04</b>	<b>0.26</b>	<b>0.83</b>	<b>0.01</b>	<b>0.60</b>	<b>0.03</b>	<b>0.31</b>	<b>0.00</b>	<b>0.01</b>	<b>0.07</b>	<b>0.03</b>	<b>0.05</b>	<b>1.55</b>	
Gon05 259b	Gon05259bph-a	6.57	0.00	0.35	57.42	0.05	25.79	0.00	8.35	0.01	0.02	0.43	0.00	0.00	98.99	
feldspar	Gon05259bph-b	7.06	0.11	0.41	56.74	0.01	24.34	0.00	7.31	0.00	0.01	0.36	0.01	0.10	96.48	
n=16	Gon05259bph-c	6.39	0.00	0.38	57.33	0.02	25.31	0.00	8.04	0.00	0.01	0.41	0.00	0.11	97.99	

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
	Gon05259bph-d	7.10	0.01	0.41	57.79	0.00	24.90	0.00	7.50	0.00	0.00	0.37	0.06	0.03	98.17	
	Gon05259bph-e	6.97	0.11	0.55	56.98	0.01	24.87	0.00	7.69	0.00	0.00	0.42	0.02	0.11	97.74	
	Gon05259bph-f	7.66	0.06	0.48	58.81	0.01	24.36	0.02	6.83	0.01	0.00	0.37	0.00	0.05	98.65	
	Gon05259bph-g	7.48	0.00	0.50	57.00	0.00	23.29	0.00	6.74	0.00	0.00	0.35	0.05	0.04	95.46	
	Gon05259bph-h	7.21	0.00	0.46	56.37	0.01	23.72	0.00	7.31	0.01	0.02	0.32	0.06	0.08	95.58	
	Gon05259bph-i	7.05	0.08	0.50	57.34	0.01	24.21	0.02	7.11	0.00	0.02	0.42	0.05	0.00	96.82	
	Gon05259bph-j	0.90	0.00	0.37	63.81	0.16	14.66	0.01	4.99	0.00	0.01	0.06	0.05	0.37	85.39	low total
	Gon05259bph-k	7.21	0.00	0.43	58.36	0.02	24.83	0.00	7.41	0.01	0.00	0.07	0.05	0.00	98.40	
	Gon05259bph-l	4.96	0.06	0.32	50.79	0.12	26.84	0.00	11.65	0.01	0.01	0.72	0.10	0.00	95.58	high CaO
	Gon05259bph-m	6.61	0.06	0.44	55.65	0.01	24.68	0.00	7.68	0.00	0.00	0.42	0.02	0.04	95.62	
	Gon05259bph-n	6.71	0.14	0.42	56.59	0.01	24.13	0.00	7.57	0.00	0.03	0.38	0.02	0.00	96.02	
	Gon05259bph-o	4.13	0.11	3.13	70.19	0.17	12.37	0.14	1.96	0.01	0.15	4.84	0.49	0.13	97.82	low CaO, high FeO
	Gon05259bph-p	7.31	0.22	0.45	59.34	0.00	24.22	0.00	6.61	0.00	0.01	0.37	0.02	0.06	98.62	
	Gon05259bph-q	3.74	0.42	0.16	34.91	0.11	8.09	0.03	26.71	0.02	0.09	0.87	0.10	0.06	75.33	low total
	Gon05259bph-r	6.80	0.00	0.45	58.07	0.02	24.22	0.00	7.34	0.00	0.01	0.36	0.00	0.00	97.29	
	Gon05259bph-s	7.14	0.00	0.60	57.96	0.01	23.91	0.00	7.03	0.00	0.00	0.38	0.00	0.03	97.07	
	Gon05259bph-t	6.99	0.00	0.39	59.08	0.03	24.99	0.00	7.42	0.00	0.01	0.35	0.01	0.07	99.34	
	Gon05259bph-u	3.53	0.08	0.36	51.38	0.01	23.28	0.14	7.52	0.00	0.00	0.36	0.05	0.00	86.71	low total
	<b>AVERAGE</b>	<b>7.02</b>	<b>0.05</b>	<b>0.45</b>	<b>57.55</b>	<b>0.01</b>	<b>24.49</b>	<b>0.00</b>	<b>7.37</b>	<b>0.00</b>	<b>0.01</b>	<b>0.36</b>	<b>0.02</b>	<b>0.04</b>	<b>97.39</b>	
	<b>σ</b>	<b>0.34</b>	<b>0.07</b>	<b>0.06</b>	<b>1.02</b>	<b>0.01</b>	<b>0.62</b>	<b>0.01</b>	<b>0.46</b>	<b>0.00</b>	<b>0.01</b>	<b>0.08</b>	<b>0.02</b>	<b>0.04</b>	<b>1.29</b>	
Gon05 259c feldspar n=2	Gon05259cph-a	2.52	0.03	0.07	44.53	0.17	28.36	0.00	15.10	0.00	0.00	0.63	0.07	0.00	91.49	low total
	Gon05259cph-b	2.70	0.00	0.07	44.68	0.15	28.66	0.01	15.01	0.00	0.02	0.69	0.07	0.00	92.07	low total
	Gon05259cph-c	1.76	0.02	0.35	59.92	0.20	13.16	0.00	4.68	0.00	0.00	0.01	0.00	0.32	80.43	low total
	Gon05259cph-d	3.35	0.00	0.08	45.99	0.16	27.58	0.00	13.75	0.01	0.00	0.66	0.03	0.04	91.65	low total
	Gon05259cph-e	2.64	0.00	0.09	44.97	0.13	28.41	0.01	14.57	0.00	0.00	0.73	0.07	0.00	91.62	low total
	Gon05259cph-f	2.95	0.00	0.07	46.67	0.19	27.95	0.00	14.29	0.01	0.00	0.68	0.07	0.00	92.88	low total
	Gon05259cph-h	2.29	0.00	0.07	44.34	0.16	29.40	0.00	15.64	0.00	0.00	0.60	0.02	0.00	92.52	low total
	Gon05259cph-i	0.97	0.00	0.47	61.11	0.10	14.19	0.00	4.71	0.01	0.00	0.00	0.00	0.43	81.99	low total
	Gon05259cph-j	2.62	0.00	0.06	45.73	0.19	28.14	0.00	14.72	0.01	0.00	0.70	0.09	0.00	92.25	low total
	Gon05259cph-k	3.05	0.02	0.06	45.21	0.15	27.69	0.00	14.01	0.00	0.00	0.66	0.04	0.04	90.93	low total
	Gon05259cph-l	3.17	0.00	0.28	67.66	0.00	11.66	0.00	3.92	0.00	0.01	0.00	0.00	0.00	86.70	low total
	Gon05259cph-m	3.44	0.05	0.11	47.86	0.17	28.18	0.00	13.58	0.00	0.02	0.71	0.10	0.09	94.31	low total
	Gon05259cph-n	2.39	0.06	0.06	45.37	0.15	30.25	0.00	15.75	0.01	0.00	0.70	0.05	0.08	94.86	low total
	Gon05259cph-o	2.51	0.00	0.03	48.25	0.17	30.18	0.01	15.28	0.01	0.00	0.60	0.05	0.00	97.11	
	Gon05259cph-p	1.18	0.00	0.19	57.82	0.97	13.68	0.00	4.27	0.00	0.03	0.04	0.00	0.27	78.45	low total
	Gon05259cph-q	2.85	0.15	0.09	45.19	0.14	29.14	0.00	15.02	0.00	0.00	0.71	0.00	0.00	93.29	low total
	Gon05259cph-r	2.33	0.00	0.05	44.45	0.16	29.42	0.00	15.42	0.00	0.01	0.62	0.04	0.14	92.64	low total
	Gon05259cph-s	3.48	0.00	0.10	47.70	0.17	28.58	0.00	14.24	0.00	0.04	0.78	0.07	0.00	95.16	
	<b>AVERAGE</b>															<b>insufficient analyses</b>
	<b>σ</b>															
Gon05 261	Gon05261ph-a	7.43	0.00	0.86	59.12	0.02	23.90	0.00	6.32	0.01	0.01	0.35	0.05	0.04	98.11	

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
feldspar n=16	<i>Gon05261ph-b</i>	6.78	0.00	0.66	54.58	0.02	24.29	0.01	7.71	0.01	0.00	0.34	0.05	0.15	94.60	low total
	<i>Gon05261ph-c</i>	6.31	0.00	0.50	55.87	0.03	25.73	0.00	8.63	0.00	0.02	0.36	0.01	0.00	97.45	
	<i>Gon05261ph-d</i>	7.33	0.03	0.75	59.55	0.02	23.98	0.00	6.49	0.01	0.02	0.28	0.05	0.08	98.58	
	<i>Gon05261ph-e</i>	7.55	0.11	0.82	57.74	0.02	23.52	0.00	6.31	0.00	0.02	0.34	0.00	0.06	96.49	
	<i>Gon05261ph-f</i>	6.25	0.00	0.58	55.30	0.01	26.50	0.00	8.34	0.00	0.01	0.36	0.00	0.08	97.44	
	<i>Gon05261ph-g</i>	6.48	0.00	0.59	56.04	0.01	25.16	0.00	8.33	0.02	0.00	0.35	0.06	0.13	97.18	
	<i>Gon05261ph-h</i>	6.65	0.00	0.65	55.66	0.03	24.87	0.00	7.90	0.02	0.04	0.32	0.00	0.08	96.22	
	<i>Gon05261ph-i</i>	6.35	0.06	0.49	56.24	0.02	24.92	0.00	8.33	0.00	0.02	0.31	0.01	0.03	96.78	
	<i>Gon05261ph-j</i>	6.91	0.00	0.68	58.79	0.02	25.73	0.00	7.59	0.00	0.00	0.37	0.08	0.14	100.31	
	<i>Gon05261ph-k</i>	6.85	0.09	0.74	57.49	0.01	24.66	0.00	7.37	0.01	0.00	0.41	0.02	0.00	97.65	
	<i>Gon05261ph-m</i>	6.78	0.14	0.73	54.61	0.01	22.02	0.00	7.21	0.01	0.00	0.34	0.06	0.12	92.04	low total
	<i>Gon05261ph-l</i>	0.23	0.00	0.40	30.63	0.00	0.05	65.40	0.08	0.00	0.01	0.02	0.02	0.07	96.91	zircon
	<i>Gon05261ph-n</i>	6.55	0.00	0.51	58.09	0.00	25.86	0.01	8.47	0.00	0.00	0.39	0.07	0.08	100.05	
	<i>Gon05261ph-o</i>	7.12	0.14	0.71	57.17	0.03	23.69	0.00	6.89	0.00	0.01	0.31	0.00	0.06	96.12	
	<i>Gon05261ph-p</i>	5.03	0.03	0.29	54.13	0.02	28.39	0.00	11.05	0.00	0.00	0.37	0.01	0.06	99.38	high CaO
	<i>Gon05261ph-q</i>	6.19	0.05	0.55	54.12	0.02	24.75	0.02	8.79	0.01	0.01	0.43	0.02	0.00	94.99	low total
	<i>Gon05261ph-r</i>	6.49	0.00	0.69	55.49	0.02	24.40	0.00	7.63	0.01	0.01	0.28	0.06	0.14	95.22	
	<i>Gon05261ph-s</i>	6.39	0.17	0.51	56.61	0.03	25.58	0.00	8.54	0.01	0.00	0.32	0.04	0.11	98.32	
	<i>Gon05261ph-t</i>	6.90	0.13	0.65	55.77	0.01	24.74	0.00	8.01	0.00	0.00	0.33	0.00	0.02	96.57	
	<i>Gon05261ph-u</i>	7.49	0.00	1.00	55.83	0.01	22.37	0.00	6.16	0.02	0.02	0.26	0.06	0.09	93.31	low total
<i>Gon05261ph-v</i>	6.68	0.12	0.78	58.83	0.02	24.71	0.00	7.22	0.00	0.00	0.41	0.01	0.14	98.92		
	<b>AVERAGE</b>	<b>6.76</b>	<b>0.05</b>	<b>0.66</b>	<b>57.11</b>	<b>0.02</b>	<b>24.87</b>	<b>0.00</b>	<b>7.65</b>	<b>0.01</b>	<b>0.01</b>	<b>0.34</b>	<b>0.03</b>	<b>0.07</b>	<b>97.59</b>	
	<b>σ</b>	<b>0.41</b>	<b>0.06</b>	<b>0.12</b>	<b>1.43</b>	<b>0.01</b>	<b>0.85</b>	<b>0.00</b>	<b>0.81</b>	<b>0.01</b>	<b>0.01</b>	<b>0.04</b>	<b>0.03</b>	<b>0.05</b>	<b>1.41</b>	
Gon05 262a1 vitric ash n=15	<i>Gon05262a1-a</i>	0.21	0.02	0.77	57.83	2.24	15.14	0.12	1.47	0.02	0.09	11.36	4.82	0.00	94.11	feldspar
	<i>Gon05262a1-b</i>	0.15	0.20	0.80	56.58	2.28	15.54	0.11	1.54	0.00	0.06	11.52	4.55	0.00	93.35	feldspar
	<i>Gon05262a1-b</i>	1.05	0.00	5.05	74.27	0.01	10.95	0.11	0.23	0.07	0.03	1.84	0.11	0.05	93.76	
	<i>Gon05262a1-c</i>	2.08	0.05	6.10	75.63	0.00	11.48	0.09	0.22	0.04	0.01	1.95	0.18	0.05	97.89	
	<i>Gon05262a1-d</i>	0.94	0.08	4.99	75.53	0.01	11.49	0.10	0.23	0.06	0.04	1.86	0.19	0.00	95.50	
	<i>Gon05262a1-e</i>	6.39	0.00	6.83	66.85	0.00	18.76	0.00	0.10	0.01	0.00	0.26	0.00	0.04	99.25	feldspar
	<i>Gon05262a1-f</i>	0.86	0.00	4.93	74.56	0.01	11.14	0.15	0.22	0.05	0.07	2.29	0.19	0.00	94.48	
	<i>Gon05262a1-g</i>	0.87	0.00	4.70	74.60	0.01	11.26	0.04	0.22	0.06	0.06	1.86	0.10	0.02	93.80	
	<i>Gon05262a1-1</i>	1.56	0.00	5.28	74.85	0.01	11.51	0.06	0.25	0.06	0.03	1.83	0.21	0.00	95.65	
	<i>Gon05262a1-2</i>	2.36	0.05	6.14	74.35	0.01	10.97	0.14	0.23	0.04	0.04	2.29	0.20	0.05	96.87	
	<i>Gon05262a1-3</i>	1.81	0.10	5.30	75.41	0.02	11.47	0.07	0.23	0.06	0.01	1.93	0.16	0.03	96.61	
	<i>Gon05262a1-4</i>	2.68	0.05	6.24	74.99	0.00	11.63	0.08	0.20	0.05	0.01	1.90	0.19	0.04	98.07	
	<i>Gon05262a1-5</i>	2.05	0.13	5.84	74.94	0.00	11.29	0.15	0.24	0.05	0.02	2.23	0.32	0.02	97.28	
	<i>Gon05262a1-6</i>	0.05	0.03	0.02	97.61	0.00	0.02	0.00	0.01	0.03	0.00	0.06	0.00	0.03	97.86	quartz
	<i>Gon05262a1-7</i>	1.68	0.00	5.43	75.13	0.02	11.32	0.15	0.24	0.06	0.06	2.34	0.28	0.03	96.73	
<i>Gon05262a1-8</i>	1.43	0.00	4.82	75.02	0.02	11.35	0.14	0.25	0.05	0.05	2.30	0.14	0.04	95.60		
<i>Gon05262a1-9</i>	0.13	0.00	0.39	55.78	1.31	5.85	0.08	2.68	0.02	0.02	8.65	0.53	0.00	75.44	low total	
<i>Gon05262a1-10</i>	1.70	0.10	5.18	74.08	0.03	11.17	0.07	0.30	0.06	0.01	2.01	0.06	0.07	94.86		
<i>Gon05262a1-11</i>	2.62	0.18	6.25	74.62	0.01	11.58	0.10	0.25	0.06	0.03	2.14	0.21	0.00	98.06		



DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)														Comments
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO	Total	
	Gon05262a1-12	1.69	0.00	5.27	74.82	0.01	11.40	0.06	0.23	0.06	0.00	2.03	0.20	0.03	95.80	
	<b>AVERAGE</b>	<b>1.69</b>	<b>0.05</b>	<b>5.43</b>	<b>74.85</b>	<b>0.01</b>	<b>11.33</b>	<b>0.10</b>	<b>0.24</b>	<b>0.06</b>	<b>0.03</b>	<b>2.05</b>	<b>0.18</b>	<b>0.03</b>	<b>96.06</b>	<b>Belewa Tuff</b>
	<b>σ</b>	<b>0.58</b>	<b>0.06</b>	<b>0.52</b>	<b>0.44</b>	<b>0.01</b>	<b>0.20</b>	<b>0.04</b>	<b>0.02</b>	<b>0.01</b>	<b>0.02</b>	<b>0.19</b>	<b>0.06</b>	<b>0.02</b>	<b>1.40</b>	
Gon05 262a1 feldspar n=8	Gon05262A1ph-a	6.46	0.15	7.23	62.24	0.00	19.31	0.00	0.09	0.00	0.00	0.16	0.04	0.16	95.85	
	Gon05262A1ph-b	6.01	0.00	7.58	62.31	0.00	17.98	0.00	0.09	0.01	0.00	0.21	0.03	0.16	94.38	low total
	Gon05262A1ph-c	7.15	0.00	7.00	69.32	0.00	19.73	0.00	0.08	0.00	0.02	0.18	0.00	0.03	103.51	
	Gon05262A1ph-d	6.01	0.00	6.85	56.99	0.00	18.73	0.00	0.09	0.01	0.02	0.24	0.00	0.11	89.04	low total
	Gon05262A1ph-e	6.42	0.07	6.87	66.73	0.00	19.33	0.01	0.09	0.00	0.03	0.25	0.00	0.15	99.94	
	Gon05262A1ph-f	6.74	0.10	6.97	67.28	0.00	20.25	0.00	0.12	0.01	0.02	0.19	0.02	0.10	101.80	
	Gon05262A1ph-g	2.46	0.30	6.16	71.82	0.00	11.59	0.08	0.22	0.05	0.03	1.89	0.14	0.00	94.75	high FeO
	Gon05262A1ph-h	6.58	0.00	7.11	66.53	0.00	20.11	0.00	0.09	0.01	0.01	0.32	0.00	0.07	100.84	
	Gon05262A1ph-i	0.03	0.13	0.01	96.59	0.00	0.02	0.00	0.01	0.02	0.01	0.00	0.00	0.07	96.91	quartz
	Gon05262A1ph-j	6.45	0.00	7.00	65.23	0.01	18.79	0.00	0.11	0.01	0.01	0.27	0.00	0.03	97.89	
	Gon05262A1ph-k	6.25	0.21	6.91	67.94	0.00	20.00	0.00	0.10	0.01	0.01	0.23	0.00	0.00	101.66	
	Gon05262A1ph-l	5.69	0.04	7.56	54.66	0.01	19.91	0.00	0.11	0.00	0.04	0.22	0.02	0.06	88.34	low total
	Gon05262A1ph-m	6.75	0.11	7.30	70.10	0.01	19.41	0.00	0.09	0.01	0.01	0.19	0.00	0.09	104.05	
	Gon05262A1ph-n	5.81	0.00	6.88	60.71	0.00	19.27	0.02	0.11	0.01	0.00	0.25	0.02	0.09	93.15	low total
	Gon05262A1ph-o	0.02	0.00	0.03	89.93	0.00	0.01	0.00	0.01	0.00	0.02	0.00	0.02	0.00	90.03	low total
	<b>AVERAGE</b>	<b>6.60</b>	<b>0.08</b>	<b>7.05</b>	<b>66.92</b>	<b>0.00</b>	<b>19.61</b>	<b>0.00</b>	<b>0.10</b>	<b>0.01</b>	<b>0.02</b>	<b>0.22</b>	<b>0.01</b>	<b>0.08</b>	<b>100.69</b>	<b>Belewa Tuff</b>
	<b>σ</b>	<b>0.28</b>	<b>0.08</b>	<b>0.15</b>	<b>2.45</b>	<b>0.00</b>	<b>0.50</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.01</b>	<b>0.06</b>	<b>0.01</b>	<b>0.06</b>	<b>2.76</b>	
Gon05 262a2 vitric ash n=13	Gon05262a2-a	1.53	0.18	5.05	75.03	0.00	11.28	0.08	0.24	0.06	0.03	1.95	0.17	0.00	95.60	
	Gon05262a2-b	1.49	0.16	5.09	74.78	0.01	11.22	0.12	0.27	0.05	0.05	2.41	0.17	0.07	95.88	
	Gon05262a2-c	1.52	0.00	5.14	75.40	0.03	11.38	0.08	0.24	0.06	0.02	2.03	0.11	0.00	96.02	
	Gon05262a2-d	1.65	0.24	5.09	75.41	0.01	11.58	0.09	0.25	0.06	0.02	1.94	0.11	0.06	96.51	
	Gon05262a2-e	1.47	0.00	5.28	74.73	0.02	11.33	0.09	0.24	0.06	0.04	1.92	0.16	0.00	95.34	
	Gon05262a2-f	1.67	0.08	5.11	76.06	0.00	11.64	0.04	0.23	0.05	0.02	1.91	0.18	0.04	97.05	
	Gon05262a2-g	1.40	0.05	4.74	74.58	0.00	11.25	0.16	0.24	0.05	0.04	2.38	0.22	0.00	95.10	
	Gon05262a2-h	1.34	0.00	4.65	74.25	0.00	10.86	0.16	0.25	0.06	0.07	2.22	0.24	0.03	94.12	
	Gon05262a2-i	1.65	0.11	5.27	76.41	0.01	11.54	0.00	0.20	0.06	0.02	1.89	0.15	0.00	97.31	
	Gon05262a2-j	0.42	0.10	0.90	59.50	2.10	10.10	0.01	5.27	0.03	0.11	6.87	1.38	0.00	86.78	low total
	Gon05262a2-k	1.46	0.05	5.48	74.63	0.01	11.60	0.05	0.22	0.06	0.03	2.00	0.11	0.00	95.70	
	Gon05262a2-l	1.35	0.08	4.95	75.51	0.02	11.08	0.09	0.22	0.07	0.03	1.86	0.21	0.10	95.57	
	Gon05262a2-m	2.81	0.05	0.09	49.58	0.21	31.68	0.00	15.23	0.00	0.04	0.74	0.09	0.00	100.53	feldspar
	Gon05262a2-n	1.58	0.00	4.99	76.05	0.01	11.57	0.05	0.22	0.06	0.02	1.99	0.12	0.02	96.68	
	Gon05262a2-o	1.60	0.08	5.49	76.24	0.01	11.56	0.11	0.23	0.00	0.04	1.83	0.23	0.03	97.44	
	Gon05262a2-p	7.13	0.00	2.47	60.83	0.01	23.50	0.00	5.27	0.00	0.00	0.46	0.06	0.61	100.35	feldspar
	<b>AVERAGE</b>	<b>1.52</b>	<b>0.08</b>	<b>5.10</b>	<b>75.31</b>	<b>0.01</b>	<b>11.38</b>	<b>0.09</b>	<b>0.23</b>	<b>0.05</b>	<b>0.03</b>	<b>2.02</b>	<b>0.17</b>	<b>0.03</b>	<b>96.02</b>	<b>Belewa Tuff</b>
	<b>σ</b>	<b>0.11</b>	<b>0.08</b>	<b>0.25</b>	<b>0.71</b>	<b>0.01</b>	<b>0.24</b>	<b>0.04</b>	<b>0.02</b>	<b>0.02</b>	<b>0.01</b>	<b>0.19</b>	<b>0.05</b>	<b>0.03</b>	<b>0.95</b>	
Gon05 262a2 feldspar	Gon05262a2ph-a	6.78	0.05	6.73	68.07	0.00	19.61	0.00	0.11	0.00	0.00	0.24	0.00	0.00	101.60	
	Gon05262a2ph-b	0.03	0.08	0.00	96.99	0.00	0.02	0.00	0.01	0.00	0.00	0.00	0.02	0.04	97.21	quartz

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
n=12	Gon05262a2ph-c	6.67	0.00	6.99	67.56	0.01	19.76	0.00	0.09	0.01	0.01	0.18	0.08	0.00	101.36	
	Gon05262a2ph-d	0.02	0.00	0.00	99.04	0.01	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.04	99.17	quartz
	Gon05262a2ph-e	6.34	0.00	7.12	69.26	0.01	20.01	0.00	0.13	0.00	0.00	0.22	0.00	0.03	103.13	
	Gon05262a2ph-f	5.87	0.00	6.93	64.30	0.01	18.01	0.00	0.10	0.05	0.02	0.17	0.05	0.09	95.61	
	Gon05262a2ph-g	6.10	0.13	7.50	67.23	0.00	19.59	0.00	0.13	0.01	0.00	0.25	0.03	0.19	101.17	
	Gon05262a2ph-h	6.51	0.00	7.03	67.25	0.00	19.88	0.00	0.11	0.00	0.03	0.18	0.00	0.00	101.00	
	Gon05262a2ph-i	6.41	0.00	6.89	66.20	0.00	19.93	0.00	0.12	0.01	0.02	0.28	0.04	0.14	100.02	
	Gon05262a2ph-j	6.43	0.16	7.18	68.57	0.00	19.74	0.00	0.08	0.00	0.00	0.24	0.07	0.13	102.61	
	Gon05262a2ph-k	1.38	0.08	5.27	74.44	0.01	11.78	0.09	0.23	0.05	0.04	1.82	0.19	0.00	95.36	high CaO, FeO
	Gon05262a2ph-l	6.31	0.00	6.74	67.42	0.00	19.11	0.00	0.10	0.00	0.00	0.24	0.03	0.06	100.03	
	Gon05262a2ph-m	6.20	0.00	7.34	67.31	0.00	19.63	0.00	0.13	0.00	0.00	0.24	0.06	0.17	101.09	
	Gon05262a2ph-n	0.04	0.00	0.01	101.51	0.00	0.01	0.00	0.02	0.00	0.00	0.01	0.00	0.08	101.70	quartz
	Gon05262a2ph-o	0.00	0.00	0.00	97.39	0.00	0.01	0.00	0.02	0.02	0.00	0.01	0.01	0.00	97.47	quartz
	Gon05262a2ph-p	0.00	0.08	0.00	98.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	98.17	quartz
	Gon05262a2ph-q	6.30	0.00	6.78	64.17	0.00	17.81	0.00	0.11	0.00	0.00	0.15	0.00	0.01	95.33	
	Gon05262a2ph-r	0.00	0.14	0.04	99.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	100.12	quartz
	Gon05262a2ph-s	6.04	0.00	7.14	63.53	0.00	18.04	0.04	0.08	0.00	0.03	0.23	0.00	0.03	95.18	
	<b>AVERAGE</b>	<b>6.33</b>	<b>0.03</b>	<b>7.03</b>	<b>66.74</b>	<b>0.00</b>	<b>19.26</b>	<b>0.00</b>	<b>0.11</b>	<b>0.01</b>	<b>0.01</b>	<b>0.22</b>	<b>0.03</b>	<b>0.07</b>	<b>99.84</b>	<b>Belewa Tuff</b>
	<b>σ</b>	<b>0.26</b>	<b>0.06</b>	<b>0.24</b>	<b>1.82</b>	<b>0.00</b>	<b>0.82</b>	<b>0.01</b>	<b>0.02</b>	<b>0.01</b>	<b>0.01</b>	<b>0.04</b>	<b>0.03</b>	<b>0.07</b>	<b>2.84</b>	
Gon05 262b	Gon05262b-a	0.02	0.03	0.01	98.41	0.00	0.02	0.00	0.00	0.00	0.08	0.00	0.00	98.58	quartz	
vitric ash	Gon05262b-b	2.91	0.00	5.84	75.13	0.00	11.12	0.19	0.21	0.05	0.05	2.30	0.26	0.00	98.05	
n=13	Gon05262b-c	1.87	0.24	5.72	74.83	0.01	11.46	0.07	0.21	0.08	0.03	1.81	0.17	0.00	96.48	
	Gon05262b-d	1.68	0.13	5.06	74.91	0.01	11.44	0.09	0.22	0.06	0.06	1.82	0.19	0.00	95.66	
	Gon05262b-e	1.88	0.05	5.48	75.71	0.01	11.57	0.07	0.22	0.06	0.03	1.84	0.11	0.01	97.02	
	Gon05262b-f	1.50	0.08	5.26	71.76	0.01	11.33	0.08	0.22	0.08	0.04	1.85	0.11	0.00	92.30	
	Gon05262b-g	2.72	0.03	6.30	75.55	0.00	11.32	0.11	0.21	0.07	0.02	1.83	0.15	0.00	98.31	
	Gon05262b-h	1.76	0.11	5.30	75.37	0.01	11.32	0.04	0.22	0.07	0.03	1.74	0.14	0.00	96.11	
	Gon05262b-i	2.24	0.03	5.75	75.33	0.00	11.76	0.10	0.21	0.06	0.01	1.72	0.10	0.06	97.36	
	Gon05262b-j	2.51	0.16	6.17	75.18	0.01	11.53	0.08	0.22	0.06	0.01	1.82	0.18	0.00	97.93	
	Gon05262b-k	1.99	0.03	54.72	71.32	0.00	11.61	0.03	0.20	0.06	0.06	1.80	0.13	0.00	141.94	machine error
	Gon05262b-l	1.79	0.08	5.43	74.96	0.00	11.37	0.11	0.23	0.05	0.04	1.78	0.12	0.08	96.02	
	Gon05262b-m	0.03	0.00	0.01	98.15	0.00	0.02	0.04	0.01	0.01	0.03	0.01	0.00	0.09	98.40	quartz
	Gon05262b-n	0.07	0.11	0.02	93.91	0.01	0.00	0.00	0.01	0.03	0.03	0.00	0.03	0.00	94.22	quartz
	Gon05262b-o	1.66	0.00	5.20	75.84	0.00	11.59	0.09	0.20	0.06	0.01	1.73	0.12	0.00	96.50	
	Gon05262b-p	1.63	0.03	5.51	73.94	0.00	10.87	0.02	0.23	0.06	0.01	1.78	0.20	0.08	94.35	
	Gon05262b-q	2.63	0.00	6.40	74.35	0.02	12.05	0.07	0.20	0.06	0.04	1.59	0.11	0.00	97.53	
	<b>AVERAGE</b>	<b>2.06</b>	<b>0.07</b>	<b>5.65</b>	<b>74.83</b>	<b>0.01</b>	<b>11.44</b>	<b>0.08</b>	<b>0.21</b>	<b>0.06</b>	<b>0.03</b>	<b>1.81</b>	<b>0.15</b>	<b>0.02</b>	<b>96.43</b>	<b>Belewa Tuff</b>
	<b>σ</b>	<b>0.48</b>	<b>0.07</b>	<b>0.43</b>	<b>1.06</b>	<b>0.01</b>	<b>0.29</b>	<b>0.04</b>	<b>0.01</b>	<b>0.01</b>	<b>0.02</b>	<b>0.16</b>	<b>0.05</b>	<b>0.03</b>	<b>1.66</b>	
Gon05 262b	Gon05262bobs-a	2.76	0.10	5.63	74.56	0.01	11.57	0.09	0.23	0.07	0.02	1.81	0.19	0.00	97.05	
obsidian clast	Gon05262bobs-b	2.90	0.10	5.53	74.41	0.02	11.70	0.03	0.25	0.07	0.03	1.75	0.16	0.00	96.96	
n=15	Gon05262bobs-c	1.56	0.10	5.31	74.43	0.00	11.36	0.05	0.21	0.06	0.04	1.84	0.19	0.05	95.22	

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
	Gon05262bobs-d	1.66	0.00	5.49	75.35	0.00	11.52	0.07	0.22	0.06	0.04	1.79	0.15	0.03	96.39	
	Gon05262bobs-e	1.75	0.00	5.21	75.80	0.01	11.62	0.10	0.24	0.07	0.02	1.73	0.17	0.00	96.72	
	Gon05262bobs-f	1.89	0.03	5.93	74.84	0.01	11.44	0.01	0.22	0.06	0.02	1.87	0.14	0.03	96.49	
	Gon05262bobs-g	1.78	0.00	5.16	75.42	0.00	11.74	0.06	0.21	0.08	0.06	1.84	0.13	0.04	96.53	
	Gon05262bobs-h	0.02	0.08	0.00	100.10	0.01	0.03	0.00	0.00	0.00	0.01	0.01	0.00	100.26	quartz	
	Gon05262bobs-i	3.13	0.00	5.78	75.36	0.00	11.73	0.06	0.26	0.06	0.04	1.67	0.13	0.07	98.28	
	Gon05262bobs-j	2.62	0.26	6.08	75.71	0.00	11.77	0.04	0.20	0.05	0.04	1.78	0.11	0.07	98.72	
	Gon05262bobs-k	3.78	0.26	4.81	77.02	0.00	12.02	0.00	0.26	0.06	0.06	1.69	0.08	0.00	100.05	
	Gon05262bobs-l	3.63	0.13	5.22	76.06	0.01	11.75	0.00	0.26	0.06	0.02	1.69	0.20	0.00	99.03	
	Gon05262bobs-m	2.90	0.03	5.55	76.83	0.01	11.81	0.05	0.20	0.06	0.02	1.75	0.14	0.00	99.37	
	Gon05262bobs-n	2.63	0.10	6.16	74.81	0.00	11.66	0.08	0.23	0.06	0.03	1.71	0.20	0.00	97.70	
	Gon05262bobs-o	1.87	0.03	5.85	76.60	0.01	11.33	0.03	0.21	0.07	0.04	1.85	0.14	0.02	98.04	
	Gon05262bobs-p	2.30	0.16	6.04	75.71	0.01	11.43	0.07	0.21	0.06	0.02	1.82	0.19	0.00	98.01	
	<b>AVERAGE</b>	<b>2.48</b>	<b>0.09</b>	<b>5.58</b>	<b>75.53</b>	<b>0.01</b>	<b>11.63</b>	<b>0.05</b>	<b>0.23</b>	<b>0.06</b>	<b>0.03</b>	<b>1.77</b>	<b>0.15</b>	<b>0.02</b>	<b>97.64</b>	<b>Belewa Tuff</b>
	<b>σ</b>	<b>0.93</b>	<b>0.09</b>	<b>1.45</b>	<b>6.20</b>	<b>0.01</b>	<b>2.91</b>	<b>0.03</b>	<b>0.06</b>	<b>0.02</b>	<b>0.02</b>	<b>0.45</b>	<b>0.05</b>	<b>0.03</b>	<b>1.43</b>	
Gon05 262c	Gon05262c-a	1.44	0.24	5.36	76.31	0.00	11.52	0.05	0.22	0.04	0.03	1.84	0.17	0.00	97.22	
vitric ash	Gon05262c-b	1.77	0.00	5.45	75.24	0.00	11.51	0.03	0.22	0.07	0.04	1.69	0.15	0.00	96.18	
n=16	Gon05262c-c	1.55	0.00	5.55	74.09	0.01	11.27	0.12	0.21	0.07	0.01	1.71	0.18	0.00	94.78	
	Gon05262c-d	1.57	0.05	5.28	75.02	0.01	11.43	0.04	0.24	0.06	0.03	1.81	0.15	0.00	95.70	
	Gon05262c-e	1.72	0.00	5.26	74.91	0.00	11.48	0.05	0.23	0.05	0.05	1.87	0.15	0.03	95.78	
	Gon05262c-f	1.99	0.00	5.86	75.56	0.01	11.47	0.10	0.21	0.06	0.04	1.81	0.11	0.08	97.31	
	Gon05262c-g	0.00	0.00	0.01	99.12	0.01	0.01	0.00	0.01	0.00	0.00	0.07	0.05	0.08	99.37	quartz
	Gon05262c-h	1.47	0.03	5.16	75.17	0.01	11.34	0.08	0.21	0.08	0.02	1.68	0.15	0.00	95.41	
	Gon05262c-i	2.08	0.13	5.74	73.12	0.00	11.13	0.07	0.22	0.05	0.04	1.73	0.18	0.00	94.49	
	Gon05262c-j	1.66	0.03	5.54	75.38	0.01	11.40	0.03	0.23	0.05	0.02	1.89	0.17	0.03	96.45	
	Gon05262c-k	1.76	0.21	5.18	77.08	0.01	11.72	0.03	0.18	0.03	0.02	1.38	0.12	0.01	97.73	
	Gon05262c-l	1.90	0.00	5.07	75.57	0.01	11.17	0.02	0.15	0.06	0.01	1.64	0.14	0.00	95.74	
	Gon05262c-m	1.49	0.05	5.40	74.96	0.01	11.36	0.09	0.24	0.06	0.03	1.73	0.12	0.02	95.57	
	Gon05262c-n	2.25	0.21	6.34	73.89	0.01	11.32	0.08	0.27	0.06	0.02	1.86	0.20	0.01	96.51	
	Gon05262c-o	0.00	0.00	0.02	100.73	0.00	0.01	0.00	0.00	0.00	0.00	0.03	0.02	0.00	100.83	quartz
	Gon05262c-p	1.46	0.10	5.23	74.06	0.00	11.62	0.07	0.22	0.07	0.02	1.74	0.10	0.00	94.69	
	Gon05262c-q	1.99	0.00	5.95	74.17	0.01	11.42	0.09	0.22	0.06	0.00	1.80	0.11	0.00	95.82	
	Gon05262c-r	0.95	0.08	3.98	70.96	0.07	10.74	0.07	0.24	0.07	0.02	1.94	0.16	0.00	89.28	low Na <sub>2</sub> O, K <sub>2</sub> O
	Gon05262c-s	2.04	0.00	6.10	74.34	0.00	11.23	0.06	0.27	0.06	0.01	1.85	0.14	0.03	96.14	
	<b>AVERAGE</b>	<b>1.76</b>	<b>0.07</b>	<b>5.53</b>	<b>74.93</b>	<b>0.01</b>	<b>11.40</b>	<b>0.06</b>	<b>0.22</b>	<b>0.06</b>	<b>0.02</b>	<b>1.75</b>	<b>0.15</b>	<b>0.01</b>	<b>95.97</b>	<b>Belewa Tuff</b>
	<b>σ</b>	<b>0.26</b>	<b>0.09</b>	<b>0.37</b>	<b>0.98</b>	<b>0.01</b>	<b>0.16</b>	<b>0.03</b>	<b>0.03</b>	<b>0.01</b>	<b>0.01</b>	<b>0.13</b>	<b>0.03</b>	<b>0.02</b>	<b>0.93</b>	
Gon05 262d	Gon05262d-a	2.59	0.00	5.97	74.28	0.01	11.32	0.11	0.23	0.07	0.01	1.85	0.11	0.02	96.58	
vitric ash	Gon05262d-b	2.46	0.09	6.13	73.98	0.02	11.37	0.12	0.23	0.06	0.01	1.77	0.11	0.05	96.38	
n=32	Gon05262d-c	2.01	0.00	5.80	74.64	0.02	11.10	0.09	0.23	0.06	0.05	1.86	0.15	0.00	96.03	
	Gon05262d-d	2.42	0.26	56.56	70.80	0.01	11.03	0.03	0.25	0.06	0.04	1.74	0.10	0.00	143.28	machine error
	Gon05262d-e	1.68	0.18	5.22	74.15	0.00	11.00	0.06	0.25	0.07	0.01	1.73	0.12	0.00	94.46	

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
	Gon05262d-f	1.61	0.00	5.22	74.24	0.00	11.02	0.11	0.22	0.05	0.01	1.89	0.09	0.00	94.46	
	Gon05262d-g	2.48	0.14	6.14	74.24	0.00	11.28	0.08	0.20	0.08	0.01	1.85	0.15	0.00	96.65	
	Gon05262d-h	0.30	0.13	1.00	26.80	3.59	4.00	0.02	0.71	0.02	0.11	47.27	0.66	0.00	84.60	low total
	Gon05262d-i	1.92	0.00	5.68	74.48	0.00	11.18	0.07	0.21	0.05	0.03	1.86	0.11	0.10	95.71	
	Gon05262d-j	2.30	0.23	6.29	73.91	0.00	11.31	0.04	0.23	0.06	0.03	1.91	0.22	0.00	96.52	
	Gon05262d-l	7.56	0.00	4.46	66.09	0.00	20.91	0.03	1.04	0.00	0.03	0.25	0.00	0.89	101.27	feldspar
	Gon05262d-m	1.99	0.11	5.80	73.85	0.02	11.32	0.12	0.22	0.06	0.04	1.88	0.17	0.00	95.57	
	Gon05262d-n	8.67	0.00	1.70	63.18	0.01	22.36	0.00	3.69	0.01	0.00	0.26	0.00	0.43	100.31	feldspar
	Gon05262d-o	1.65	0.05	5.48	74.25	0.01	11.23	0.08	0.23	0.06	0.04	1.85	0.16	0.00	95.09	
	Gon05262d-p	1.58	0.05	4.79	74.20	0.01	11.17	0.05	0.27	0.05	0.03	1.95	0.23	0.00	94.38	
	Gon05262d-q	1.77	0.17	5.55	74.45	0.02	11.18	0.08	0.23	0.07	0.01	1.86	0.16	0.14	95.69	
	Gon05262d-r	1.75	0.00	5.51	75.18	0.00	11.44	0.12	0.21	0.04	0.05	1.91	0.20	0.03	96.45	
	Gon05262d-s	7.44	0.00	6.00	66.84	0.00	19.93	0.03	0.60	0.01	0.00	0.51	0.09	0.14	101.57	feldspar
	Gon05262d-t	1.95	0.00	5.63	73.91	0.01	11.17	0.09	0.21	0.06	0.07	1.80	0.07	0.06	95.02	
	Gon05262d-u	0.33	0.00	0.18	94.38	0.00	0.76	0.00	0.07	0.00	0.01	0.09	0.02	0.16	96.01	quartz
	Gon05262d-v	1.56	0.00	4.84	73.42	0.01	11.30	0.11	0.27	0.06	0.03	2.18	0.22	0.07	94.07	
	Gon05262d-w	0.18	0.00	0.04	6.82	0.16	1.54	0.07	0.22	0.01	0.16	74.67	1.01	0.10	84.99	low total
	Gon05262d-a	1.30	0.03	5.27	73.93	0.01	11.49	0.10	0.16	0.04	0.03	1.92	0.24	0.00	94.53	
	Gon05262d-b	2.36	0.09	6.29	74.71	0.00	11.70	0.09	0.23	0.05	0.03	1.91	0.14	0.03	97.64	
	Gon05262d-c	6.08	0.00	0.42	57.43	0.05	27.26	0.00	9.12	0.01	0.00	0.79	0.16	0.26	101.58	feldspar
	Gon05262d-d	1.48	0.17	5.34	73.99	0.00	11.48	0.06	0.25	0.05	0.02	1.92	0.16	0.00	94.93	
	Gon05262d-e	1.69	0.15	5.93	74.94	0.01	11.63	0.12	0.23	0.04	0.00	2.16	0.16	0.09	97.17	
	Gon05262d-f	1.58	0.03	5.60	74.04	0.01	11.44	0.04	0.24	0.06	0.01	1.96	0.14	0.00	95.15	
	Gon05262d-g	1.88	0.06	5.85	72.48	0.01	11.23	0.07	0.24	0.05	0.03	1.83	0.13	0.00	93.86	
	Gon05262d-h	1.44	0.22	5.59	74.92	0.01	11.80	0.09	0.22	0.05	0.05	1.89	0.15	0.02	96.46	
	Gon05262d-i	1.38	0.06	5.49	73.87	0.00	11.44	0.04	0.19	0.06	0.05	1.80	0.17	0.00	94.55	
	Gon05262d-j	1.54	0.24	5.69	73.95	0.01	12.04	0.08	0.27	0.06	0.03	1.96	0.17	0.00	96.05	
	Gon05262d-k	1.52	0.18	5.59	73.83	0.00	11.65	0.04	0.21	0.05	0.02	1.89	0.17	0.00	95.15	
	Gon05262d-l	1.58	0.10	5.65	75.25	0.01	11.64	0.06	0.22	0.06	0.05	1.86	0.15	0.04	96.67	
	Gon05262d-m	0.08	0.00	0.21	42.26	0.39	24.66	0.07	0.73	0.02	0.00	2.39	0.36	0.01	71.17	low total
	Gon05262d-n	1.78	0.29	5.88	74.36	0.00	11.61	0.08	0.24	0.07	0.02	1.83	0.20	0.00	96.35	
	Gon05262d-o	2.35	0.09	6.25	75.31	0.00	11.54	0.04	0.21	0.05	0.01	1.95	0.20	0.03	98.02	
	Gon05262d-p	1.48	0.02	5.57	74.46	0.00	11.61	0.10	0.22	0.06	0.03	1.82	0.17	0.00	95.55	
	Gon05262d-r	2.02	0.16	5.99	75.10	0.00	11.65	0.10	0.23	0.06	0.06	1.90	0.19	0.00	97.46	
	Gon05262d-s	2.04	0.08	6.01	74.87	0.00	11.74	0.12	0.22	0.05	0.05	1.79	0.10	0.09	97.17	
	Gon05262d-t	1.39	0.11	5.49	74.45	0.00	11.35	0.05	0.21	0.07	0.06	1.80	0.11	0.01	95.09	
	<b>AVERAGE</b>	<b>1.83</b>	<b>0.10</b>	<b>5.68</b>	<b>74.30</b>	<b>0.01</b>	<b>11.42</b>	<b>0.08</b>	<b>0.23</b>	<b>0.06</b>	<b>0.03</b>	<b>1.89</b>	<b>0.16</b>	<b>0.02</b>	<b>95.80</b>	<b>Belewa Tuff</b>
	<b>σ</b>	<b>0.36</b>	<b>0.08</b>	<b>0.37</b>	<b>0.58</b>	<b>0.01</b>	<b>0.24</b>	<b>0.03</b>	<b>0.02</b>	<b>0.01</b>	<b>0.02</b>	<b>0.09</b>	<b>0.04</b>	<b>0.04</b>	<b>1.11</b>	
Gon05 262d obsidian clast n=16	Gon05262dobs-b	2.52	0.00	6.16	75.08	0.00	11.48	0.12	0.23	0.05	0.03	1.80	0.10	0.02	97.58	
	Gon05262dobs-c	2.44	0.00	5.96	75.32	0.01	11.53	0.02	0.21	0.04	0.04	1.96	0.16	0.00	97.68	
	Gon05262dobs-d	2.32	0.21	6.18	74.53	0.00	11.61	0.06	0.24	0.07	0.02	1.78	0.12	0.03	97.19	
	Gon05262dobs-e	2.10	0.00	5.87	74.11	0.01	11.51	0.09	0.24	0.06	0.02	1.82	0.13	0.00	95.95	

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
	Gon05262dobs-f	2.55	0.00	5.95	74.88	0.01	11.62	0.07	0.19	0.06	0.00	1.74	0.15	0.00	97.21	
	Gon05262dobs-g	2.68	0.16	5.90	74.32	0.01	11.64	0.08	0.21	0.06	0.03	1.80	0.22	0.00	97.10	
	Gon05262dobs-h	2.69	0.05	6.14	75.57	0.00	11.61	0.13	0.22	0.04	0.01	1.89	0.13	0.06	98.56	
	Gon05262dobs-i	1.89	0.00	5.30	77.28	0.01	11.38	0.06	0.23	0.08	0.01	1.76	0.13	0.00	98.12	
	Gon05262dobs-j	1.89	0.18	5.30	74.97	0.00	11.61	0.06	0.21	0.05	0.04	1.87	0.16	0.00	96.33	
	Gon05262dobs-k	2.08	0.00	5.72	76.92	0.01	11.35	0.02	0.19	0.05	0.02	1.86	0.13	0.11	98.47	
	Gon05262dobs-l	2.32	0.00	6.16	74.71	0.01	11.48	0.05	0.18	0.07	0.02	1.70	0.13	0.05	96.90	
	Gon05262dobs-m	1.70	0.00	5.18	73.56	0.00	11.28	0.06	0.21	0.07	0.05	1.73	0.13	0.00	93.96	
	Gon05262dobs-n	2.54	0.00	6.24	74.31	0.00	11.51	0.11	0.21	0.06	0.00	1.84	0.16	0.00	96.99	
	Gon05262dobs-o	1.57	0.05	5.27	75.31	0.00	11.46	0.10	0.27	0.06	0.04	1.76	0.19	0.00	96.09	
	Gon05262dobs-p	2.46	0.00	5.87	77.74	0.00	11.27	0.06	0.21	0.06	0.03	1.80	0.23	0.00	99.72	
	Gon05262dobs-q	1.50	0.00	5.16	73.02	0.01	10.95	0.09	0.23	0.07	0.02	1.89	0.16	0.00	93.11	
	<b>AVERAGE</b>	<b>2.20</b>	<b>0.04</b>	<b>5.77</b>	<b>75.10</b>	<b>0.00</b>	<b>11.46</b>	<b>0.07</b>	<b>0.22</b>	<b>0.06</b>	<b>0.02</b>	<b>1.81</b>	<b>0.15</b>	<b>0.02</b>	<b>96.94</b>	<b>Belewa Tuff</b>
	<b>σ</b>	<b>0.39</b>	<b>0.07</b>	<b>0.40</b>	<b>1.29</b>	<b>0.00</b>	<b>0.18</b>	<b>0.03</b>	<b>0.02</b>	<b>0.01</b>	<b>0.01</b>	<b>0.07</b>	<b>0.04</b>	<b>0.03</b>	<b>1.65</b>	
Gon05 262e	Gon05262e-a	1.62	0.00	5.02	76.54	0.02	11.37	0.08	0.23	0.06	0.05	1.90	0.18	0.00	97.07	
vitric ash	Gon05262e-b	1.37	0.03	4.94	75.42	0.00	11.28	0.09	0.23	0.04	0.05	2.06	0.15	0.00	95.65	
n=15	Gon05262e-c	1.57	0.00	4.94	76.60	0.02	11.25	0.12	0.24	0.09	0.01	2.06	0.23	0.00	97.14	
	Gon05262e-d	1.51	0.00	5.62	72.40	0.00	11.12	0.08	0.25	0.07	0.05	2.12	0.25	0.00	93.47	
	Gon05262e-e	1.53	0.21	5.59	75.51	0.01	11.40	0.09	0.26	0.06	0.04	1.97	0.24	0.02	96.93	
	Gon05262e-f	1.66	0.00	5.32	77.27	0.01	11.63	0.08	0.23	0.05	0.04	2.25	0.19	0.06	98.79	
	<i>Gon05262e-g</i>	<i>0.93</i>	<i>0.08</i>	<i>5.11</i>	<i>61.58</i>	<i>0.01</i>	<i>11.50</i>	<i>0.07</i>	<i>0.23</i>	<i>0.06</i>	<i>0.05</i>	<i>2.10</i>	<i>0.22</i>	<i>0.00</i>	<i>81.94</i>	low total
	Gon05262e-h	2.28	0.00	6.33	74.69	0.01	11.88	0.09	0.24	0.06	0.02	2.10	0.12	0.00	97.82	
	Gon05262e-i	1.35	0.05	5.25	76.11	0.00	11.54	0.05	0.23	0.06	0.01	1.97	0.16	0.04	96.84	
	Gon05262e-j	1.59	0.13	5.20	76.70	0.02	11.38	0.03	0.21	0.04	0.03	1.93	0.17	0.02	97.47	
	Gon05262e-k	1.62	0.08	5.27	74.67	0.01	11.48	0.01	0.21	0.08	0.03	1.76	0.21	0.00	95.42	
	Gon05262e-l	1.56	0.13	5.13	76.02	0.01	11.65	0.07	0.23	0.05	0.02	2.00	0.21	0.03	97.09	
	Gon05262e-m	2.50	0.00	6.35	76.05	0.00	11.61	0.06	0.23	0.07	0.01	1.87	0.14	0.08	98.98	
	Gon05262e-n	1.67	0.18	4.78	79.40	0.00	11.53	0.06	0.22	0.06	0.03	2.02	0.14	0.07	100.18	
	Gon05262e-o	1.82	0.10	5.43	75.24	0.00	11.66	0.08	0.39	0.05	0.05	2.27	0.13	0.06	97.29	
	Gon05262e-p	1.80	0.13	5.53	73.40	0.00	11.39	0.12	0.25	0.07	0.02	1.80	0.22	0.00	94.74	
	<b>AVERAGE</b>	<b>1.70</b>	<b>0.07</b>	<b>5.38</b>	<b>75.74</b>	<b>0.01</b>	<b>11.48</b>	<b>0.07</b>	<b>0.24</b>	<b>0.06</b>	<b>0.03</b>	<b>2.01</b>	<b>0.18</b>	<b>0.02</b>	<b>96.99</b>	<b>Belewa Tuff</b>
	<b>σ</b>	<b>0.30</b>	<b>0.07</b>	<b>0.44</b>	<b>1.58</b>	<b>0.01</b>	<b>0.19</b>	<b>0.03</b>	<b>0.04</b>	<b>0.01</b>	<b>0.01</b>	<b>0.14</b>	<b>0.04</b>	<b>0.03</b>	<b>1.64</b>	
Gon05 262f	<i>Gon05262f-a</i>	<i>0.10</i>	<i>0.00</i>	<i>0.31</i>	<i>55.62</i>	<i>0.47</i>	<i>8.90</i>	<i>0.12</i>	<i>2.41</i>	<i>0.01</i>	<i>0.06</i>	<i>7.30</i>	<i>2.39</i>	<i>0.00</i>	<i>77.70</i>	low total
vitric ash	Gon05262f-b	1.65	0.10	5.19	76.26	0.00	11.53	0.04	0.20	0.07	0.02	2.00	0.19	0.00	97.27	
n=15	Gon05262f-c	1.65	0.00	5.27	75.36	0.00	11.51	0.04	0.20	0.06	0.08	1.86	0.21	0.00	96.24	
	Gon05262f-d	1.66	0.00	5.20	76.48	0.02	11.31	0.08	0.21	0.06	0.05	1.89	0.17	0.02	97.13	
	Gon05262f-e	1.86	0.03	5.58	75.81	0.01	11.65	0.05	0.23	0.07	0.03	1.84	0.15	0.00	97.31	
	Gon05262f-f	1.40	0.08	5.20	76.37	0.02	11.38	0.11	0.22	0.05	0.04	1.83	0.13	0.00	96.82	
	Gon05262f-g	1.63	0.13	5.13	76.36	0.00	11.39	0.09	0.26	0.07	0.00	1.75	0.14	0.01	96.97	
	Gon05262f-h	1.55	0.16	5.28	75.87	0.01	11.60	0.13	0.26	0.05	0.05	1.85	0.20	0.00	97.03	
	Gon05262f-i	1.46	0.13	5.24	74.58	0.01	11.39	0.13	0.24	0.07	0.03	1.85	0.10	0.00	95.24	

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments		
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total	
	<i>Gon05262f-j</i>	0.00	0.00	0.03	0.97	0.01	0.02	0.00	0.00	0.21	0.01	0.01	0.03	0.00	1.28	low total	
	<i>Gon05262f-k</i>	1.75	0.18	5.34	74.62	0.01	11.32	0.07	0.22	0.07	0.00	1.64	0.15	0.00	95.36		
	<i>Gon05262f-l</i>	1.84	0.10	5.63	75.33	0.01	11.60	0.05	0.24	0.06	0.03	1.82	0.09	0.00	96.81		
	<i>Gon05262f-m</i>	1.44	0.00	5.05	75.84	0.00	11.21	0.02	0.21	0.07	0.01	1.68	0.17	0.00	95.72		
	<i>Gon05262f-n</i>	1.50	0.21	5.57	74.21	0.00	11.26	0.05	0.22	0.06	0.03	1.77	0.10	0.00	94.99		
	<i>Gon05262f-o</i>	2.00	0.00	6.13	76.18	0.01	11.69	0.07	0.22	0.05	0.05	1.86	0.17	0.00	98.44		
	<i>Gon05262f-p</i>	1.78	0.00	5.66	75.14	0.00	11.52	0.04	0.22	0.07	0.00	1.82	0.11	0.01	96.37		
	<i>Gon05262f-q</i>	1.66	0.05	5.70	75.23	0.01	11.62	0.12	0.23	0.07	0.02	1.79	0.15	0.00	96.64		
	<b>AVERAGE</b>	<b>1.66</b>	<b>0.08</b>	<b>5.41</b>	<b>75.58</b>	<b>0.01</b>	<b>11.46</b>	<b>0.07</b>	<b>0.23</b>	<b>0.06</b>	<b>0.03</b>	<b>1.82</b>	<b>0.15</b>	<b>0.00</b>	<b>96.55</b>		<b>Belewa Tuff</b>
	<b>σ</b>	<b>0.16</b>	<b>0.07</b>	<b>0.28</b>	<b>0.70</b>	<b>0.01</b>	<b>0.15</b>	<b>0.04</b>	<b>0.02</b>	<b>0.01</b>	<b>0.02</b>	<b>0.08</b>	<b>0.04</b>	<b>0.00</b>	<b>0.89</b>		
Gon05 262f obsidian clast n=12	<i>Gon05262fobs-a</i>	1.57	0.03	5.28	74.90	0.00	11.28	0.06	0.20	0.06	0.01	1.90	0.03	0.00	95.34	Fe-Mg mineral	
	<i>Gon05262fobs-b</i>	1.70	0.05	5.66	75.41	0.00	11.59	0.05	0.25	0.05	0.03	2.13	0.14	0.00	97.08		
	<i>Gon05262fobs-c</i>	1.64	0.00	5.28	74.94	0.01	11.61	0.07	0.24	0.06	0.05	2.13	0.16	0.00	96.20		
	<i>Gon05262fobs-d</i>	1.66	0.18	5.40	75.95	0.02	11.54	0.10	0.26	0.05	0.02	2.09	0.22	0.14	97.62		
	<i>Gon05262fobs-e</i>	2.54	0.05	6.05	75.12	0.00	11.65	0.08	0.21	0.06	0.02	1.74	0.13	0.00	97.65		
	<i>Gon05262fobs-f</i>	2.77	0.00	5.84	75.50	0.01	11.55	0.02	0.20	0.06	0.03	1.78	0.19	0.00	97.95		
	<i>Gon05262fobs-g</i>	2.20	0.05	5.81	75.50	0.02	11.36	0.05	0.20	0.08	0.02	1.73	0.16	0.00	97.19		
	<i>Gon05262fobs-h</i>	2.49	0.00	6.10	75.97	0.01	11.47	0.05	0.21	0.06	0.01	1.79	0.19	0.09	98.44		
	<i>Gon05262fobs-i</i>	0.41	0.11	1.22	51.45	9.80	9.85	0.02	2.06	0.00	0.11	18.63	0.06	0.00	93.72		
	<i>Gon05262fobs-j</i>	3.00	0.23	5.57	75.22	0.01	11.47	0.13	0.24	0.07	0.01	1.86	0.13	0.03	97.98		
	<i>Gon05262fobs-k</i>	2.14	0.18	5.81	75.57	0.01	11.45	0.11	0.22	0.06	0.02	2.00	0.22	0.00	97.78		
	<i>Gon05262fobs-l</i>	2.74	0.08	5.65	75.42	0.00	11.56	0.13	0.23	0.06	0.04	1.91	0.19	0.04	98.04		
	<i>Gon05262fobs-m</i>	2.00	0.16	5.76	74.57	0.00	10.92	0.04	0.22	0.05	0.01	1.83	0.19	0.05	95.81		
	<i>Gon05262fobs-n</i>	3.91	0.00	5.22	76.70	0.00	13.60	0.06	0.41	0.02	0.04	2.29	0.19	0.02	102.46		high CaO
	<i>Gon05262fobs-o</i>	3.75	0.16	5.44	77.15	0.01	13.01	0.06	0.71	0.01	0.03	2.00	0.17	0.00	102.51		high CaO
	<i>Gon05262fobs-p</i>	3.45	0.46	5.53	74.00	0.01	12.94	0.11	0.44	0.04	0.05	2.12	0.19	0.00	99.35		high CaO
<i>Gon05262fobs-q</i>	4.02	0.00	5.07	74.87	0.00	12.85	0.06	0.49	0.01	0.14	2.99	0.16	0.07	100.73	high CaO		
	<b>AVERAGE</b>	<b>2.20</b>	<b>0.08</b>	<b>5.68</b>	<b>75.34</b>	<b>0.01</b>	<b>11.46</b>	<b>0.07</b>	<b>0.23</b>	<b>0.06</b>	<b>0.02</b>	<b>1.91</b>	<b>0.16</b>	<b>0.03</b>	<b>97.26</b>	<b>Belewa Tuff</b>	
	<b>σ</b>	<b>0.50</b>	<b>0.08</b>	<b>0.27</b>	<b>0.41</b>	<b>0.01</b>	<b>0.20</b>	<b>0.04</b>	<b>0.02</b>	<b>0.01</b>	<b>0.01</b>	<b>0.15</b>	<b>0.05</b>	<b>0.04</b>	<b>0.98</b>		
Gon05 262h vitric ash n=14	<i>Gon05262h-a</i>	1.63	0.08	5.59	73.99	0.01	11.51	0.10	0.24	0.06	0.03	1.83	0.26	0.05	95.39	feldspar	
	<i>Gon05262h-b</i>	2.37	0.08	6.25	75.57	0.00	11.80	0.05	0.34	0.07	0.05	2.00	0.15	0.07	98.78		
	<i>Gon05262h-c</i>	2.57	0.03	6.28	75.04	0.01	11.95	0.03	0.24	0.06	0.01	1.83	0.17	0.00	98.22		
	<i>Gon05262h-d</i>	2.47	0.00	5.98	75.78	0.01	11.72	0.06	0.28	0.06	0.05	2.00	0.19	0.10	98.70		
	<i>Gon05262h-e</i>	1.67	0.00	5.44	73.53	0.02	11.07	0.05	0.24	0.05	0.03	1.66	0.20	0.01	93.98		
	<i>Gon05262h-f</i>	6.72	0.00	6.01	66.20	0.00	19.43	0.00	0.53	0.00	0.00	0.26	0.00	0.82	99.96		
	<i>Gon05262h-g</i>	1.82	0.00	5.81	75.45	0.01	12.15	0.05	0.16	0.06	0.03	1.76	0.12	0.00	97.43		
	<i>Gon05262h-h</i>	2.17	0.00	5.87	75.55	0.01	11.57	0.02	0.31	0.05	0.06	1.93	0.12	0.00	97.66		
	<i>Gon05262h-i</i>	1.47	0.00	5.43	77.06	0.03	11.92	0.07	0.24	0.07	0.06	1.90	0.16	0.00	98.39		
	<i>Gon05262h-j</i>	1.54	0.00	5.33	75.01	0.01	11.69	0.00	0.23	0.06	0.03	1.88	0.23	0.08	96.10		
	<i>Gon05262h-k</i>	1.49	0.00	5.25	75.02	0.02	11.64	0.03	0.27	0.05	0.02	1.93	0.20	0.05	95.98		
<i>Gon05262h-l</i>	1.41	0.03	5.20	74.16	0.02	12.14	0.09	0.46	0.04	0.01	2.36	0.24	0.00	96.16			

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
	Gon05262h-m	1.69	0.05	5.61	74.90	0.03	11.64	0.10	0.22	0.06	0.01	1.88	0.10	0.00	96.29	
	Gon05262h-n	1.83	0.08	5.69	75.03	0.01	11.71	0.08	0.29	0.05	0.04	1.89	0.18	0.06	96.93	
	Gon05262h-o	7.06	0.00	5.51	65.52	0.01	19.99	0.00	0.62	0.00	0.01	0.19	0.03	0.91	99.86	feldspar
	Gon05262h-p	1.70	0.10	5.26	74.71	0.02	11.91	0.10	0.39	0.05	0.03	2.27	0.18	0.00	96.74	
	Gon05262h-q	6.69	0.00	6.85	67.76	0.01	19.32	0.00	0.20	0.00	0.00	0.30	0.01	0.27	101.41	feldspar
	<b>AVERAGE</b>	<b>1.84</b>	<b>0.03</b>	<b>5.64</b>	<b>75.06</b>	<b>0.02</b>	<b>11.74</b>	<b>0.06</b>	<b>0.28</b>	<b>0.05</b>	<b>0.03</b>	<b>1.94</b>	<b>0.18</b>	<b>0.03</b>	<b>96.91</b>	<b>Belewa Tuff</b>
	<b>σ</b>	<b>0.39</b>	<b>0.04</b>	<b>0.36</b>	<b>0.86</b>	<b>0.01</b>	<b>0.27</b>	<b>0.03</b>	<b>0.08</b>	<b>0.01</b>	<b>0.02</b>	<b>0.18</b>	<b>0.05</b>	<b>0.04</b>	<b>1.38</b>	
Gon05 262h obsidian clast n=17	Gon05262hobs-a	2.72	0.03	6.21	74.65	0.03	11.68	0.02	0.26	0.06	0.04	1.90	0.17	0.00	97.77	
	Gon05262hobs-b	2.00	0.13	5.73	75.50	0.01	11.66	0.10	0.22	0.05	0.02	1.97	0.15	0.00	97.56	
	Gon05262hobs-c	2.62	0.16	6.16	74.99	0.01	11.46	0.04	0.22	0.07	0.05	1.86	0.17	0.00	97.80	
	Gon05262hobs-d	2.80	0.03	5.80	74.58	0.03	11.69	0.05	0.27	0.06	0.06	1.85	0.20	0.00	97.42	
	Gon05262hobs-e	2.73	0.05	6.02	76.12	0.03	11.77	0.08	0.25	0.06	0.05	1.83	0.15	0.00	99.15	
	Gon05262hobs-f	2.95	0.13	5.10	74.75	0.00	11.72	0.06	0.28	0.06	0.03	1.90	0.18	0.07	97.24	
	Gon05262hobs-g	2.18	0.16	5.85	74.52	0.01	11.58	0.09	0.29	0.05	0.04	1.88	0.19	0.00	96.82	
	Gon05262hobs-h	2.71	0.18	5.69	74.70	0.00	11.71	0.08	0.28	0.07	0.04	2.04	0.16	0.00	97.66	
	Gon05262hobs-i	2.81	0.05	5.14	75.97	0.00	11.78	0.02	0.29	0.06	0.01	2.08	0.17	0.00	98.43	
	Gon05262hobs-j	2.69	0.10	5.94	75.46	0.00	11.74	0.08	0.30	0.05	0.06	2.04	0.21	0.00	98.68	
	Gon05262hobs-k	2.42	0.00	6.15	74.43	0.01	11.72	0.01	0.25	0.05	0.03	1.88	0.16	0.00	97.13	
	Gon05262hobs-l	2.37	0.00	6.23	74.28	0.01	11.80	0.09	0.21	0.04	0.06	1.76	0.11	0.00	96.95	
	Gon05262hobs-n	2.48	0.18	6.30	75.03	0.02	11.73	0.03	0.26	0.06	0.02	1.84	0.15	0.00	98.11	
	Gon05262hobs-m	2.59	0.05	6.05	74.90	0.01	11.89	0.03	0.24	0.07	0.06	1.87	0.13	0.04	97.95	
	Gon05262hobs-o	2.06	0.03	6.02	74.36	0.02	11.77	0.08	0.24	0.06	0.03	1.86	0.15	0.00	96.69	
	Gon05262hobs-p	1.52	0.05	5.35	74.51	0.02	11.72	0.03	0.22	0.05	0.03	1.84	0.21	0.06	95.63	
	Gon05262hobs-q	1.91	0.00	5.11	75.03	0.01	11.69	0.02	0.26	0.05	0.04	1.84	0.20	0.00	96.16	
	<b>AVERAGE</b>	<b>2.45</b>	<b>0.08</b>	<b>5.82</b>	<b>74.93</b>	<b>0.01</b>	<b>11.71</b>	<b>0.05</b>	<b>0.26</b>	<b>0.06</b>	<b>0.04</b>	<b>1.90</b>	<b>0.17</b>	<b>0.01</b>	<b>97.48</b>	<b>Belewa Tuff</b>
	<b>σ</b>	<b>0.39</b>	<b>0.07</b>	<b>0.41</b>	<b>0.54</b>	<b>0.01</b>	<b>0.09</b>	<b>0.03</b>	<b>0.03</b>	<b>0.01</b>	<b>0.02</b>	<b>0.09</b>	<b>0.03</b>	<b>0.02</b>	<b>0.89</b>	
Gon05 262i feldspar n=6	Gon05262iph-a	5.60	0.00	6.66	64.91	0.01	18.61	0.00	0.49	0.01	0.00	0.22	0.01	0.36	96.90	
	Gon05262iph-b	6.91	0.06	6.03	63.85	0.00	20.00	0.03	0.51	0.01	0.00	0.23	0.02	1.01	98.66	
	Gon05262iph-c	0.04	0.08	0.00	97.72	0.01	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.00	97.87	quartz
	Gon05262iph-d	7.61	0.00	4.02	67.22	0.00	20.87	0.00	1.18	0.01	0.00	0.17	0.00	0.76	101.85	high CaO
	Gon05262iph-e	5.78	0.02	7.59	64.62	0.00	19.34	0.00	0.22	0.00	0.00	0.24	0.00	1.27	99.07	
	Gon05262iph-f	0.06	0.14	0.00	96.42	0.01	0.01	0.04	0.02	0.01	0.02	0.00	0.04	0.00	96.77	quartz
	Gon05262iph-g	0.00	0.10	0.00	97.25	0.00	0.00	0.01	0.01	0.00	0.00	0.03	0.01	0.00	97.42	quartz
	Gon05262iph-h	7.53	0.00	2.00	63.77	0.01	21.72	0.00	3.41	0.00	0.00	0.32	0.01	0.67	99.45	high CaO
	Gon05262iph-i	5.63	0.00	6.78	64.19	0.00	18.35	0.01	0.10	0.01	0.01	0.16	0.00	0.13	95.35	
	Gon05262iph-k	0.01	0.03	0.00	98.33	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.10	98.49	quartz
	Gon05262iph-l	0.00	0.00	0.00	97.48	0.01	0.02	0.00	0.02	0.01	0.01	0.00	0.00	0.01	97.56	quartz
	Gon05262iph-m	6.90	0.10	6.94	65.98	0.00	19.64	0.00	0.49	0.01	0.00	0.12	0.05	0.32	100.53	
	Gon05262iph-n	0.01	0.00	0.01	97.28	0.01	0.02	0.02	0.00	0.00	0.00	0.01	0.04	0.00	97.40	quartz
	Gon05262iph-o	7.04	0.02	5.70	66.72	0.00	21.25	0.00	0.81	0.00	0.03	0.19	0.00	1.75	103.51	
	Gon05262iph-p	0.00	0.00	0.01	98.52	0.00	0.01	0.00	0.01	0.01	0.01	0.02	0.05	0.05	98.70	quartz

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)														Comments
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO	Total	
	<b>AVERAGE</b>	<b>6.31</b>	<b>0.03</b>	<b>6.62</b>	<b>65.04</b>	<b>0.00</b>	<b>19.53</b>	<b>0.01</b>	<b>0.43</b>	<b>0.01</b>	<b>0.01</b>	<b>0.19</b>	<b>0.01</b>	<b>0.81</b>	<b>99.00</b>	<b>Belewa Tuff</b>
	<b>σ</b>	<b>0.70</b>	<b>0.04</b>	<b>0.67</b>	<b>1.10</b>	<b>0.00</b>	<b>1.05</b>	<b>0.01</b>	<b>0.25</b>	<b>0.01</b>	<b>0.01</b>	<b>0.05</b>	<b>0.02</b>	<b>0.64</b>	<b>2.85</b>	
Gon05 265a	Gon05265a-a	1.78	0.03	4.15	70.34	0.00	10.68	0.11	0.20	0.06	0.05	1.81	0.15	0.00	89.35	
vitric ash	Gon05265a-b	1.71	0.00	4.47	72.49	0.00	11.06	0.07	0.24	0.06	0.04	1.64	0.13	0.00	91.89	
n=20	Gon05265a-c	1.75	0.03	4.35	72.56	0.00	11.02	0.08	0.22	0.06	0.06	1.69	0.17	0.18	92.17	
	Gon05265a-d	1.62	0.08	4.67	72.68	0.01	10.97	0.10	0.21	0.06	0.01	1.76	0.11	0.08	92.35	
	Gon05265a-e	2.10	0.00	5.94	72.69	0.00	10.80	0.11	0.12	0.07	0.03	1.70	0.13	0.00	93.68	
	Gon05265a-f	1.59	0.10	4.70	72.05	0.01	10.99	0.04	0.22	0.06	0.02	1.76	0.18	0.06	91.78	
	Gon05265a-g	1.93	0.05	4.46	73.09	0.00	10.92	0.04	0.20	0.07	0.03	1.83	0.13	0.04	92.79	
	Gon05265a-h	1.91	0.00	5.07	71.16	0.00	10.85	0.13	0.22	0.06	0.04	1.78	0.16	0.00	91.37	
	Gon05265a-i	3.02	0.05	6.10	73.45	0.00	10.95	0.09	0.21	0.05	0.05	1.92	0.16	0.00	96.06	
	Gon05265a-j	1.73	0.08	4.76	72.76	0.00	10.96	0.07	0.21	0.06	0.03	1.69	0.14	0.02	92.51	
	Gon05265a-k	1.85	0.05	4.42	71.94	0.01	10.89	0.11	0.23	0.06	0.05	1.74	0.18	0.00	91.53	
	Gon05265a-l	1.89	0.18	4.50	72.01	0.00	11.05	0.09	0.20	0.06	0.04	1.87	0.16	0.00	92.05	
	Gon05265a-m	2.10	0.16	5.85	71.89	0.01	10.76	0.07	0.25	0.05	0.01	1.94	0.10	0.08	93.27	
	Gon05265a-n	1.86	0.00	4.82	72.08	0.01	10.95	0.08	0.21	0.07	0.02	1.85	0.19	0.00	92.14	
	Gon05265a-o	1.82	0.00	4.41	71.74	0.01	11.04	0.06	0.21	0.07	0.04	1.77	0.24	0.00	91.41	
	Gon05265a-p	1.73	0.00	4.81	71.83	0.01	10.95	0.05	0.22	0.07	0.03	1.71	0.16	0.04	91.60	
	Gon05265a-q	3.09	0.00	5.78	72.00	0.00	10.93	0.06	0.21	0.06	0.02	1.72	0.07	0.03	93.98	
	Gon05265a-r	1.57	0.00	4.95	72.12	0.01	10.81	0.08	0.24	0.06	0.07	1.77	0.11	0.02	91.82	
	Gon05265a-s	1.94	0.00	5.06	72.72	0.01	10.95	0.08	0.22	0.07	0.05	1.87	0.13	0.00	93.08	
	Gon05265a-t	1.74	0.00	4.85	72.40	0.00	10.96	0.06	0.21	0.07	0.05	1.77	0.11	0.07	92.29	
	<b>AVERAGE</b>	<b>1.94</b>	<b>0.04</b>	<b>4.91</b>	<b>72.20</b>	<b>0.00</b>	<b>10.92</b>	<b>0.08</b>	<b>0.21</b>	<b>0.06</b>	<b>0.04</b>	<b>1.78</b>	<b>0.14</b>	<b>0.03</b>	<b>92.36</b>	<b>Belewa Tuff</b>
	<b>σ</b>	<b>0.41</b>	<b>0.06</b>	<b>0.57</b>	<b>0.68</b>	<b>0.00</b>	<b>0.10</b>	<b>0.02</b>	<b>0.03</b>	<b>0.01</b>	<b>0.02</b>	<b>0.08</b>	<b>0.04</b>	<b>0.05</b>	<b>1.32</b>	
Gon05 265b	Gon05265B-a	2.20	0.26	5.63	72.12	0.00	10.81	0.08	0.22	0.05	0.03	1.79	0.07	0.00	93.27	
vitric ash	Gon05265B-b	2.68	0.10	5.84	72.11	0.00	10.94	0.09	0.21	0.06	0.01	1.74	0.11	0.00	93.90	
n=20	Gon05265B-c	2.12	0.00	5.51	72.94	0.00	10.92	0.09	0.14	0.07	0.06	1.37	0.09	0.00	93.30	
	Gon05265B-d	1.73	0.03	5.28	75.04	0.01	10.83	0.09	0.19	0.06	0.00	1.69	0.17	0.00	95.11	
	Gon05265B-e	1.87	0.00	4.89	72.72	0.01	10.82	0.09	0.19	0.06	0.01	1.79	0.09	0.03	92.59	
	Gon05265B-f	1.84	0.00	4.64	72.28	0.00	10.94	0.06	0.21	0.06	0.05	1.77	0.11	0.00	91.97	
	Gon05265B-g	2.01	0.16	5.31	72.14	0.00	10.81	0.11	0.17	0.04	0.06	1.82	0.15	0.00	92.78	
	Gon05265B-h	1.79	0.18	5.02	72.53	0.00	11.08	0.10	0.20	0.07	0.02	1.80	0.11	0.00	92.90	
	Gon05265B-i	2.08	0.00	5.42	71.57	0.01	10.84	0.07	0.20	0.06	0.01	1.76	0.14	0.00	92.15	
	Gon05265B-j	1.69	0.00	4.82	71.58	0.00	10.81	0.07	0.20	0.06	0.05	1.63	0.16	0.03	91.09	
	Gon05265B-k	1.85	0.18	5.35	71.83	0.00	10.83	0.04	0.20	0.07	0.04	1.83	0.16	0.00	92.38	
	Gon05265B-l	1.68	0.00	4.87	71.40	0.01	10.74	0.05	0.23	0.06	0.07	1.69	0.13	0.06	90.99	
	Gon05265B-m	2.66	0.13	5.90	72.37	0.01	10.87	0.04	0.20	0.06	0.03	1.74	0.14	0.01	94.15	
	Gon05265B-n	1.74	0.00	4.84	72.10	0.01	10.91	0.07	0.21	0.05	0.05	1.71	0.15	0.00	91.85	
	Gon05265B-o	1.85	0.03	4.58	73.01	0.00	10.96	0.13	0.21	0.06	0.04	1.77	0.13	0.00	92.77	
	Gon05265B-p	1.77	0.00	4.44	72.47	0.01	10.89	0.04	0.22	0.07	0.03	1.71	0.14	0.03	91.81	
	Gon05265B-q	1.89	0.00	4.56	71.81	0.02	10.71	0.03	0.25	0.07	0.02	1.78	0.16	0.13	91.43	



DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)														Comments
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO	Total	
	Gon05265B-r	2.88	0.13	5.80	71.97	0.01	10.65	0.06	0.23	0.05	0.02	1.69	0.17	0.00	93.65	
	Gon05265B-s	1.91	0.00	5.04	72.05	0.00	11.08	0.06	0.23	0.07	0.01	1.88	0.11	0.00	92.44	
	Gon05265B-t	2.05	0.00	5.61	73.29	0.00	10.90	0.05	0.21	0.06	0.05	1.83	0.24	0.00	94.28	
	<b>AVERAGE</b>	<b>2.01</b>	<b>0.06</b>	<b>5.17</b>	<b>72.37</b>	<b>0.00</b>	<b>10.87</b>	<b>0.07</b>	<b>0.21</b>	<b>0.06</b>	<b>0.03</b>	<b>1.74</b>	<b>0.13</b>	<b>0.01</b>	<b>92.74</b>	<b>Belewa Tuff</b>
	<b>σ</b>	<b>0.35</b>	<b>0.08</b>	<b>0.46</b>	<b>0.80</b>	<b>0.01</b>	<b>0.11</b>	<b>0.03</b>	<b>0.02</b>	<b>0.01</b>	<b>0.02</b>	<b>0.11</b>	<b>0.04</b>	<b>0.03</b>	<b>1.10</b>	
Gon05 265c feldspar n=18	Gon05265cph-a	6.35	0.00	5.81	64.85	0.01	20.30	0.00	0.65	0.00	0.00	0.19	0.05	0.97	99.19	
	Gon05265cph-b	6.55	0.00	6.73	64.97	0.01	19.45	0.03	0.13	0.00	0.01	0.20	0.03	0.08	98.19	
	Gon05265cph-c	6.77	0.00	5.66	64.99	0.01	20.41	0.00	0.67	0.01	0.01	0.17	0.00	0.93	99.63	
	Gon05265cph-e	6.56	0.00	6.26	65.87	0.01	20.10	0.00	0.37	0.00	0.00	0.20	0.01	0.34	99.73	
	Gon05265cph-f	6.66	0.00	5.65	65.43	0.00	20.39	0.01	0.57	0.01	0.02	0.19	0.00	0.83	99.77	
	<i>Gon05265cph-g</i>	<i>6.44</i>	<i>0.03</i>	<i>6.25</i>	<i>59.22</i>	<i>0.00</i>	<i>18.57</i>	<i>0.01</i>	<i>0.43</i>	<i>0.00</i>	<i>0.00</i>	<i>0.21</i>	<i>0.00</i>	<i>0.10</i>	<i>91.27</i>	low total
	Gon05265cph-h	6.65	0.18	6.74	66.87	0.01	20.12	0.00	0.16	0.01	0.00	0.21	0.01	0.12	101.10	
	Gon05265cph-i	7.00	0.00	6.15	66.55	0.00	20.11	0.05	0.40	0.00	0.01	0.20	0.02	0.20	100.68	
	Gon05265cph-j	6.46	0.00	6.69	66.90	0.00	20.82	0.00	0.13	0.01	0.00	0.24	0.00	0.03	101.29	
	Gon05265cph-k	6.40	0.00	6.85	66.52	0.01	20.16	0.00	0.20	0.00	0.00	0.19	0.05	0.15	100.53	
	Gon05265cph-l	6.32	0.10	6.83	62.90	0.01	19.59	0.00	0.23	0.00	0.00	0.22	0.00	0.09	96.31	
	Gon05265cph-m	6.66	0.00	6.25	64.50	0.01	19.75	0.00	0.40	0.00	0.00	0.17	0.03	0.27	98.04	
	Gon05265cph-n	6.70	0.15	6.11	65.73	0.00	20.15	0.02	0.50	0.00	0.02	0.20	0.00	0.85	100.46	
	Gon05265cph-o	6.68	0.08	5.45	65.33	0.00	20.87	0.00	0.67	0.00	0.01	0.17	0.04	1.23	100.54	
	Gon05265cph-p	6.61	0.09	6.59	63.10	0.01	18.20	0.03	0.28	0.00	0.06	0.21	0.01	0.15	95.33	
	<i>Gon05265cph-q</i>	<i>6.59</i>	<i>0.03</i>	<i>0.50</i>	<i>58.93</i>	<i>0.03</i>	<i>28.33</i>	<i>0.00</i>	<i>7.98</i>	<i>0.01</i>	<i>0.00</i>	<i>0.37</i>	<i>0.06</i>	<i>0.00</i>	<i>102.84</i>	high CaO
	Gon05265cph-r	7.05	0.02	5.45	65.27	0.00	20.32	0.00	0.60	0.00	0.00	0.18	0.00	0.57	99.45	
	Gon05265cph-s	6.31	0.03	6.73	65.43	0.01	19.54	0.00	0.28	0.00	0.01	0.19	0.01	0.23	98.78	
	Gon05265cph-t	6.39	0.05	6.69	64.77	0.00	19.14	0.00	0.28	0.00	0.00	0.23	0.03	0.13	97.71	
	Gon05265cph-u	6.71	0.00	6.98	64.76	0.00	19.46	0.00	0.13	0.00	0.01	0.22	0.04	0.00	98.32	
	<b>AVERAGE</b>	<b>6.60</b>	<b>0.04</b>	<b>6.31</b>	<b>65.26</b>	<b>0.01</b>	<b>19.94</b>	<b>0.01</b>	<b>0.37</b>	<b>0.00</b>	<b>0.01</b>	<b>0.20</b>	<b>0.02</b>	<b>0.40</b>	<b>99.17</b>	<b>Belewa Tuff</b>
	<b>σ</b>	<b>0.21</b>	<b>0.06</b>	<b>0.52</b>	<b>1.11</b>	<b>0.01</b>	<b>0.64</b>	<b>0.01</b>	<b>0.20</b>	<b>0.00</b>	<b>0.01</b>	<b>0.02</b>	<b>0.02</b>	<b>0.39</b>	<b>1.63</b>	
Gon05 265c obsidian clast n=21	Gon05265cobs-a	1.22	0.00	5.22	73.47	0.00	11.24	0.05	0.21	0.06	0.00	1.82	0.10	0.07	93.45	
	Gon05265cobs-b	1.38	0.00	5.46	74.18	0.00	11.46	0.06	0.21	0.06	0.01	1.83	0.18	0.00	94.85	
	Gon05265cobs-c	1.70	0.24	5.70	74.02	0.00	11.54	0.11	0.20	0.05	0.07	1.80	0.16	0.00	95.60	
	Gon05265cobs-d	1.33	0.00	5.08	73.89	0.01	11.38	0.07	0.22	0.05	0.01	1.82	0.12	0.00	93.97	
	Gon05265cobs-e	1.22	0.21	5.58	74.45	0.00	11.40	0.09	0.22	0.05	0.03	1.78	0.23	0.00	95.27	
	Gon05265cobs-f	1.23	0.16	5.29	73.79	0.00	11.33	0.06	0.23	0.04	0.05	1.74	0.17	0.10	94.20	
	Gon05265cobs-g	1.45	0.02	5.31	73.92	0.01	11.40	0.06	0.23	0.05	0.00	1.82	0.12	0.00	94.40	
	Gon05265cobs-h	1.40	0.08	5.32	73.35	0.01	11.28	0.16	0.22	0.06	0.01	1.77	0.19	0.00	93.83	
	Gon05265cobs-i	1.19	0.05	4.56	74.32	0.00	11.45	0.05	0.22	0.06	0.03	1.80	0.16	0.02	93.89	
	Gon05265cobs-j	1.00	0.08	4.71	72.99	0.00	10.85	0.08	0.22	0.07	0.00	1.76	0.12	0.00	91.88	
	Gon05265cobs-k	0.96	0.00	4.63	73.95	0.00	11.33	0.04	0.21	0.07	0.03	1.83	0.14	0.00	93.18	
	Gon05265cobs-l	0.94	0.21	4.47	74.14	0.02	11.31	0.06	0.20	0.06	0.01	1.83	0.21	0.04	93.50	
	Gon05265cobs-m	1.97	0.19	5.91	73.21	0.00	11.28	0.14	0.23	0.07	0.06	1.67	0.18	0.00	94.91	
	Gon05265cobs-n	1.05	0.01	4.63	74.16	0.01	11.37	0.04	0.23	0.06	0.03	1.79	0.14	0.00	93.54	

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
	Gon05265cobs-o	1.98	0.11	5.54	74.03	0.00	11.16	0.05	0.21	0.07	0.00	1.65	0.09	0.00	94.90	
	Gon05265cobs-p	1.25	0.03	5.25	73.23	0.00	11.23	0.04	0.20	0.06	0.04	1.71	0.12	0.00	93.16	
	Gon05265cobs-q	1.88	0.00	5.53	72.77	0.00	11.18	0.02	0.20	0.07	0.05	1.75	0.22	0.08	93.75	
	Gon05265cobs-r	1.84	0.00	5.81	73.58	0.01	11.35	0.09	0.21	0.05	0.00	1.74	0.12	0.00	94.81	
	Gon05265cobs-s	1.19	0.11	5.12	72.44	0.00	11.16	0.02	0.20	0.06	0.04	1.67	0.11	0.00	92.14	
	Gon05265cobs-t	1.33	0.00	5.37	75.30	0.01	11.23	0.07	0.20	0.07	0.03	1.80	0.06	0.03	95.50	
	Gon05265cobs-u	1.90	0.03	5.63	71.72	0.01	11.22	0.09	0.23	0.05	0.02	1.68	0.17	0.09	92.84	
	<b>AVERAGE</b>	<b>1.40</b>	<b>0.07</b>	<b>5.24</b>	<b>73.66</b>	<b>0.00</b>	<b>11.29</b>	<b>0.07</b>	<b>0.21</b>	<b>0.06</b>	<b>0.02</b>	<b>1.76</b>	<b>0.15</b>	<b>0.02</b>	<b>93.98</b>	<b>Belewa Tuff</b>
	<b>σ</b>	<b>0.34</b>	<b>0.08</b>	<b>0.43</b>	<b>0.77</b>	<b>0.00</b>	<b>0.14</b>	<b>0.04</b>	<b>0.01</b>	<b>0.01</b>	<b>0.02</b>	<b>0.06</b>	<b>0.05</b>	<b>0.03</b>	<b>1.03</b>	
Gon05 270	Gon05270a	2.29	0.24	6.59	74.73	0.01	12.73	0.05	0.66	0.03	0.02	0.69	0.15	0.00	98.20	
obsidian	Gon05270b	1.82	0.03	6.44	74.71	0.00	12.71	0.03	0.65	0.02	0.05	1.32	0.17	0.15	98.10	high FeO
n=13	Gon05270c	2.04	0.21	6.43	74.57	0.02	12.65	0.05	0.62	0.04	0.07	0.77	0.27	0.00	97.74	
	Gon05270d	0.59	0.00	4.89	75.43	0.03	12.80	0.03	0.69	0.03	0.03	0.87	0.14	0.16	95.68	low Na <sub>2</sub> O
	Gon05270e	2.18	0.13	6.50	74.24	0.03	12.72	0.01	0.67	0.04	0.04	0.68	0.14	0.12	97.51	
	Gon05270f	2.03	0.00	6.72	73.77	0.02	12.56	0.01	0.65	0.03	0.01	0.85	0.14	0.19	96.99	
	Gon05270g	2.26	0.29	6.39	73.26	0.03	12.57	0.03	0.62	0.03	0.03	0.75	0.18	0.05	96.50	
	Gon05270h	1.95	0.03	6.32	75.21	0.03	12.63	0.09	0.65	0.03	0.03	0.80	0.19	0.13	98.09	
	Gon05270i	1.82	0.16	6.46	74.45	0.03	12.62	0.07	0.70	0.04	0.00	0.80	0.19	0.00	97.34	
	Gon05270j	2.13	0.00	6.50	71.62	0.05	12.29	0.06	0.61	0.03	0.12	6.94	0.21	0.19	100.75	high FeO
	Gon05270k	2.37	0.13	6.38	73.92	0.03	12.77	0.04	0.64	0.02	0.04	0.84	0.14	0.03	97.34	
	Gon05270l	1.68	0.00	6.14	74.57	0.03	12.78	0.04	0.65	0.02	0.04	0.76	0.14	0.01	96.86	
	Gon05270m	2.36	0.00	6.03	73.61	0.04	12.39	0.05	0.64	0.01	0.05	2.67	0.20	0.00	98.07	high FeO
	Gon05270n	2.02	0.00	6.59	74.42	0.01	12.79	0.08	0.72	0.03	0.01	0.87	0.16	0.00	97.68	
	Gon05270o	2.22	0.08	6.56	74.61	0.01	12.66	0.03	0.65	0.03	0.03	0.75	0.17	0.03	97.82	
	Gon05270p	2.04	0.16	6.45	73.44	0.01	12.48	0.01	0.67	0.03	0.02	0.95	0.19	0.09	96.54	
	Gon05270q	2.11	0.13	6.65	74.16	0.02	12.63	0.04	0.64	0.04	0.03	0.73	0.16	0.08	97.41	
	<b>AVERAGE</b>	<b>2.05</b>	<b>0.12</b>	<b>6.48</b>	<b>74.29</b>	<b>0.02</b>	<b>12.65</b>	<b>0.04</b>	<b>0.66</b>	<b>0.03</b>	<b>0.03</b>	<b>0.78</b>	<b>0.17</b>	<b>0.06</b>	<b>97.39</b>	
	<b>σ</b>	<b>0.19</b>	<b>0.09</b>	<b>0.15</b>	<b>0.54</b>	<b>0.01</b>	<b>0.09</b>	<b>0.02</b>	<b>0.03</b>	<b>0.01</b>	<b>0.02</b>	<b>0.07</b>	<b>0.03</b>	<b>0.06</b>	<b>0.54</b>	
Gon05 271*	Gon05271ph-a	7.32	0.03	3.55	64.87	0.01	20.85	0.02	1.73	0.01	0.01	0.25	0.00	0.53	99.17	
feldspar	Gon05271ph-b	8.02	0.00	3.02	62.83	0.00	18.92	0.00	2.27	0.01	0.00	0.28	0.00	0.44	95.78	
n=17	Gon05271ph-c	7.13	0.10	4.70	65.15	0.01	20.11	0.00	0.94	0.00	0.01	0.21	0.02	0.31	98.67	low CaO
	Gon05271ph-d	0.37	0.00	0.00	48.43	3.91	0.63	0.00	18.25	0.00	1.01	25.06	0.25	0.00	97.92	Fe-Mg mineral
	Gon05271ph-e	7.91	0.00	3.08	60.44	0.01	20.96	0.00	2.12	0.01	0.02	0.19	0.02	0.33	95.07	
	Gon05271ph-f	7.51	0.12	3.09	64.55	0.01	20.54	0.01	2.17	0.00	0.02	0.18	0.00	0.39	98.60	
	Gon05271ph-g	8.43	0.00	3.43	65.96	0.01	21.60	0.01	1.83	0.00	0.03	0.26	0.00	0.62	102.17	
	Gon05271ph-h	8.06	0.02	3.28	65.21	0.00	21.45	0.00	2.05	0.01	0.00	0.23	0.05	0.60	100.96	
	Gon05271ph-i	7.60	0.00	4.26	63.86	0.00	21.73	0.00	1.34	0.00	0.01	0.22	0.00	0.50	99.52	
	Gon05271ph-j	8.41	0.03	3.21	63.15	0.01	20.31	0.03	2.20	0.00	0.00	0.25	0.02	0.48	98.11	
	Gon05271ph-k	8.98	0.10	3.49	66.04	0.01	21.74	0.00	1.81	0.00	0.03	0.21	0.00	0.53	102.95	
	Gon05271ph-l	7.90	0.00	3.09	64.54	0.01	21.75	0.01	2.22	0.01	0.01	0.24	0.02	0.61	100.40	
	Gon05271ph-m	7.84	0.00	4.24	67.98	0.00	21.26	0.00	1.06	0.03	0.01	0.22	0.01	0.38	103.03	

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
	Gon05271ph-n	8.07	0.00	3.53	66.32	0.01	21.55	0.00	1.96	0.00	0.00	0.28	0.02	0.68	102.42	
	Gon05271ph-o	8.05	0.10	3.76	67.08	0.00	21.52	0.01	1.64	0.01	0.00	0.20	0.03	0.62	103.02	
	Gon05271ph-p	7.79	0.00	3.41	67.26	0.01	21.88	0.00	1.81	0.00	0.00	0.24	0.01	0.45	102.87	
	Gon05271ph-q	1.47	0.08	5.25	74.81	0.00	11.41	0.16	0.25	0.06	0.05	2.33	0.18	0.00	96.05	low CaO, high FeO
	Gon05271ph-r	8.34	0.00	2.55	64.83	0.00	21.99	0.00	2.67	0.00	0.01	0.25	0.02	0.39	101.05	
	Gon05271ph-s	7.83	0.00	3.93	66.26	0.00	20.58	0.03	1.50	0.00	0.01	0.17	0.00	0.50	100.81	
	Gon05271ph-t	8.18	0.23	3.45	67.54	0.01	21.40	0.00	1.95	0.00	0.00	0.31	0.00	0.56	103.63	
	<b>AVERAGE</b>	<b>8.01</b>	<b>0.04</b>	<b>3.43</b>	<b>65.22</b>	<b>0.01</b>	<b>21.18</b>	<b>0.01</b>	<b>1.90</b>	<b>0.00</b>	<b>0.01</b>	<b>0.23</b>	<b>0.01</b>	<b>0.50</b>	<b>100.56</b>	<b>Ogoti Tuff</b>
	<b>σ</b>	<b>0.39</b>	<b>0.06</b>	<b>0.44</b>	<b>1.94</b>	<b>0.00</b>	<b>0.77</b>	<b>0.01</b>	<b>0.38</b>	<b>0.01</b>	<b>0.01</b>	<b>0.04</b>	<b>0.01</b>	<b>0.10</b>	<b>2.56</b>	
Gon05 272	Gon05272-a	2.79	0.00	5.53	72.48	0.01	11.44	0.08	0.43	0.05	0.03	1.74	0.16	0.02	94.76	
obsidian	Gon05272-b	3.40	0.00	4.81	72.70	0.01	11.53	0.08	0.42	0.04	0.03	1.71	0.09	0.09	94.93	
n=18	Gon05272-c	3.45	0.13	5.03	74.01	0.02	11.51	0.00	0.43	0.04	0.03	1.73	0.11	0.21	96.70	
	Gon05272-d	2.25	0.16	5.43	73.10	0.03	11.48	0.05	0.40	0.04	0.02	1.70	0.06	0.07	94.81	
	Gon05272-e	2.96	0.10	5.67	72.56	0.02	11.50	0.03	0.40	0.03	0.02	1.60	0.07	0.00	94.97	
	Gon05272-f	2.85	0.21	5.42	72.75	0.02	11.49	0.04	0.40	0.04	0.03	1.58	0.14	0.03	95.01	
	Gon05272-g	3.02	0.21	5.24	72.39	0.01	11.37	0.03	0.46	0.04	0.06	1.57	0.16	0.18	94.74	
	Gon05272-h	2.07	0.03	5.31	72.46	0.00	11.43	0.04	0.44	0.03	0.03	1.71	0.11	0.00	93.65	
	Gon05272-i	0.28	0.05	0.00	50.84	15.32	2.90	0.02	18.99	0.00	0.22	9.10	1.07	0.00	98.78	Fe-Mg-Ti mineral
	Gon05272-j	0.34	0.00	0.01	49.90	14.97	2.82	0.00	20.21	0.00	0.21	7.94	0.84	0.00	97.25	Fe-Mg-Ti mineral
	Gon05272-k	2.88	0.00	5.92	72.21	0.01	11.23	0.01	0.35	0.04	0.02	1.62	0.18	0.13	94.61	
	Gon05272-l	3.20	0.00	4.68	72.72	0.03	11.37	0.00	0.38	0.04	0.02	1.62	0.10	0.00	94.15	
	Gon05272-m	2.74	0.00	5.82	72.52	0.03	11.31	0.03	0.37	0.04	0.04	1.67	0.13	0.07	94.79	
	Gon05272-n	3.19	0.36	5.37	72.59	0.03	11.19	0.07	0.36	0.04	0.02	1.68	0.13	0.00	95.06	
	Gon05272-o	2.60	0.00	5.84	72.25	0.01	11.20	0.00	0.38	0.03	0.10	1.62	0.14	0.00	94.17	
	Gon05272-p	3.12	0.29	5.09	73.35	0.02	11.24	0.08	0.37	0.04	0.04	1.54	0.11	0.09	95.38	
	Gon05272-q	2.66	0.05	6.08	72.54	0.02	11.43	0.03	0.37	0.03	0.08	1.75	0.11	0.05	95.22	
	Gon05272-r	3.27	0.08	4.93	72.51	0.03	11.45	0.04	0.45	0.04	0.05	1.84	0.05	0.17	94.90	
	Gon05272-s	3.15	0.10	4.93	72.47	0.04	11.56	0.02	0.40	0.05	0.09	1.80	0.13	0.00	94.73	
	Gon05272-t	2.54	0.10	6.01	71.43	0.03	11.21	0.00	0.42	0.04	0.02	1.60	0.20	0.09	93.69	
	<b>AVERAGE</b>	<b>2.90</b>	<b>0.10</b>	<b>5.39</b>	<b>72.61</b>	<b>0.02</b>	<b>11.39</b>	<b>0.04</b>	<b>0.40</b>	<b>0.04</b>	<b>0.04</b>	<b>1.67</b>	<b>0.12</b>	<b>0.07</b>	<b>94.79</b>	
	<b>σ</b>	<b>0.38</b>	<b>0.11</b>	<b>0.43</b>	<b>0.52</b>	<b>0.01</b>	<b>0.13</b>	<b>0.03</b>	<b>0.03</b>	<b>0.01</b>	<b>0.02</b>	<b>0.08</b>	<b>0.04</b>	<b>0.07</b>	<b>0.67</b>	
Gon05 273b*	Gon05273b-a	1.67	0.27	5.62	70.55	0.01	11.63	0.04	0.41	0.06	0.05	1.74	0.19	0.03	92.28	
vitric ash	Gon05273b-b	1.70	0.00	6.04	73.52	0.02	12.01	0.06	0.38	0.07	0.02	1.82	0.13	0.00	95.77	
n=20	Gon05273b-c	1.72	0.00	5.37	75.11	0.00	12.50	0.06	0.42	0.06	0.07	1.76	0.13	0.00	97.21	
	Gon05273b-d	2.20	0.20	6.38	73.38	0.01	12.25	0.00	0.44	0.06	0.01	1.67	0.13	0.07	96.80	
	Gon05273b-e	2.21	0.21	5.91	71.44	0.01	12.04	0.04	0.42	0.08	0.03	1.73	0.19	0.00	94.30	
	Gon05273b-f	1.58	0.00	5.97	75.23	0.01	12.14	0.06	0.40	0.07	0.05	1.78	0.18	0.08	97.53	
	Gon05273b-g	2.06	0.13	6.24	73.67	0.00	11.81	0.06	0.40	0.06	0.02	1.88	0.16	0.09	96.60	
	Gon05273b-h	2.17	0.00	6.31	74.85	0.01	12.13	0.02	0.43	0.07	0.06	1.77	0.19	0.05	98.06	
	Gon05273b-i	1.48	0.00	5.35	69.01	0.00	11.94	0.02	0.41	0.06	0.05	1.79	0.16	0.07	90.36	
	Gon05273b-j	1.80	0.05	5.85	75.95	0.01	12.14	0.03	0.45	0.06	0.00	1.74	0.15	0.01	98.25	

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
	Gon05273b-k	1.81	0.13	6.13	73.20	0.03	12.03	0.04	0.40	0.06	0.05	1.73	0.14	0.09	95.84	
	Gon05273b-l	2.16	0.00	6.13	73.94	0.01	12.13	0.03	0.40	0.07	0.02	1.77	0.14	0.09	96.88	
	Gon05273b-m	2.10	0.00	6.10	73.64	0.01	12.29	0.06	0.42	0.07	0.02	1.89	0.22	0.06	96.89	
	Gon05273b-n	1.44	0.04	4.90	72.70	0.01	11.98	0.04	0.39	0.07	0.05	1.76	0.13	0.00	93.50	
	Gon05273b-o	1.90	0.03	5.33	70.82	0.01	11.86	0.00	0.40	0.07	0.01	1.81	0.13	0.10	92.46	
	Gon05273b-p	1.74	0.09	5.90	73.43	0.00	12.25	0.00	0.39	0.07	0.06	1.76	0.11	0.05	95.86	
	Gon05273b-q	2.42	0.07	5.39	73.42	0.00	12.49	0.05	0.44	0.08	0.05	1.76	0.13	0.11	96.40	
	Gon05273b-r	1.50	0.06	5.67	70.70	0.00	11.64	0.04	0.39	0.06	0.00	1.82	0.15	0.00	92.03	
	Gon05273b-s	1.67	0.08	5.72	73.71	0.01	12.12	0.03	0.43	0.06	0.04	1.76	0.17	0.00	95.80	
	Gon05273b-t	2.05	0.00	6.34	71.63	0.00	12.22	0.00	0.42	0.06	0.04	1.86	0.13	0.07	94.84	
	<b>AVERAGE</b>	<b>1.87</b>	<b>0.07</b>	<b>5.83</b>	<b>73.00</b>	<b>0.01</b>	<b>12.08</b>	<b>0.03</b>	<b>0.41</b>	<b>0.07</b>	<b>0.04</b>	<b>1.78</b>	<b>0.15</b>	<b>0.05</b>	<b>95.38</b>	<b>Ogoti Tuff</b>
	<b>σ</b>	<b>0.28</b>	<b>0.08</b>	<b>0.41</b>	<b>1.79</b>	<b>0.01</b>	<b>0.23</b>	<b>0.02</b>	<b>0.02</b>	<b>0.01</b>	<b>0.02</b>	<b>0.05</b>	<b>0.03</b>	<b>0.04</b>	<b>2.21</b>	
Gon05 273b*	Gon05273bph-a	6.66	0.00	5.51	67.09	0.00	20.32	0.00	0.62	0.01	0.00	0.26	0.02	0.68	101.16	
feldspar	Gon05273bph-b	6.76	0.00	5.62	64.65	0.01	20.51	0.05	0.72	0.00	0.00	0.18	0.09	0.61	99.19	
n=17	Gon05273bph-c	6.81	0.14	5.05	66.51	0.01	20.23	0.00	0.67	0.00	0.01	0.20	0.00	0.63	100.27	
	<i>Gon05273bph-d</i>	<i>0.95</i>	<i>0.16</i>	<i>3.96</i>	<i>74.15</i>	<i>0.01</i>	<i>11.85</i>	<i>0.06</i>	<i>0.43</i>	<i>0.07</i>	<i>0.02</i>	<i>1.75</i>	<i>0.11</i>	<i>0.06</i>	<i>93.59</i>	low total
	Gon05273bph-e	7.21	0.28	5.48	65.87	0.01	20.13	0.04	0.71	0.01	0.02	0.16	0.02	0.80	100.73	
	<i>Gon05273bph-g</i>	<i>0.00</i>	<i>0.00</i>	<i>0.02</i>	<i>30.77</i>	<i>0.00</i>	<i>0.01</i>	<i>65.75</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>96.55</i>	zircon
	<i>Gon05273bph-h</i>	<i>7.53</i>	<i>0.06</i>	<i>3.23</i>	<i>61.82</i>	<i>0.00</i>	<i>20.63</i>	<i>0.00</i>	<i>1.91</i>	<i>0.00</i>	<i>0.01</i>	<i>0.23</i>	<i>0.00</i>	<i>0.64</i>	<i>96.07</i>	feldspar
	Gon05273bph-i	7.36	0.00	5.46	66.30	0.01	20.31	0.00	0.65	0.00	0.00	0.26	0.00	0.38	100.73	
	<i>Gon05273bph-j</i>	<i>8.29</i>	<i>0.04</i>	<i>2.67</i>	<i>65.91</i>	<i>0.01</i>	<i>21.80</i>	<i>0.02</i>	<i>2.35</i>	<i>0.00</i>	<i>0.00</i>	<i>0.23</i>	<i>0.03</i>	<i>0.81</i>	<i>102.17</i>	feldspar
	Gon05273bph-k	7.02	0.00	5.34	65.69	0.01	20.77	0.00	0.78	0.01	0.00	0.17	0.00	0.75	100.53	
	Gon05273bph-l	7.27	0.09	5.15	64.40	0.01	20.39	0.00	0.79	0.00	0.00	0.22	0.02	0.69	99.03	
	Gon05273bph-m	7.48	0.07	4.68	62.27	0.02	19.48	0.00	0.98	0.01	0.00	0.20	0.03	0.57	95.77	
	Gon05273bph-n	7.28	0.03	5.14	63.26	0.00	18.75	0.00	0.85	0.01	0.02	0.20	0.00	0.77	96.32	
	<i>Gon05273bph-o</i>	<i>1.80</i>	<i>0.20</i>	<i>5.17</i>	<i>72.49</i>	<i>0.01</i>	<i>11.79</i>	<i>0.07</i>	<i>0.39</i>	<i>0.06</i>	<i>0.02</i>	<i>1.71</i>	<i>0.21</i>	<i>0.00</i>	<i>93.91</i>	low CaO, high FeO
	Gon05273bph-p	7.23	0.11	5.65	66.03	0.00	20.04	0.00	0.65	0.01	0.00	0.18	0.00	0.67	100.57	
	Gon05273bph-q	7.23	0.00	5.01	66.26	0.02	20.49	0.00	0.95	0.00	0.02	0.14	0.04	0.65	100.82	
	Gon05273bph-r	7.62	0.00	4.70	65.93	0.00	20.14	0.00	0.90	0.00	0.00	0.21	0.00	0.57	100.07	
	Gon05273bph-s	7.05	0.06	5.05	65.09	0.01	19.95	0.00	0.94	0.01	0.00	0.24	0.00	0.70	99.10	
	<i>Gon05273bph-t</i>	<i>0.03</i>	<i>0.00</i>	<i>0.00</i>	<i>1.22</i>	<i>0.08</i>	<i>0.68</i>	<i>0.00</i>	<i>0.01</i>	<i>0.01</i>	<i>0.70</i>	<i>68.29</i>	<i>21.33</i>	<i>0.00</i>	<i>92.35</i>	Fe-Ti oxide
	Gon05273bph-u	7.27	0.03	5.24	65.98	0.00	20.09	0.00	0.86	0.00	0.00	0.21	0.00	0.64	100.34	
	Gon05273bph-v	7.29	0.06	5.61	65.52	0.00	19.85	0.00	0.58	0.00	0.00	0.18	0.04	0.42	99.55	
	Gon05273bph-w	7.39	0.16	5.79	65.39	0.01	19.54	0.00	0.61	0.00	0.05	0.22	0.01	0.60	99.75	
	Gon05273bph-x	7.05	0.00	5.49	64.83	0.02	19.93	0.03	0.63	0.00	0.03	0.19	0.03	0.71	98.94	
	<b>AVERAGE</b>	<b>7.18</b>	<b>0.06</b>	<b>5.29</b>	<b>65.36</b>	<b>0.01</b>	<b>20.06</b>	<b>0.01</b>	<b>0.76</b>	<b>0.00</b>	<b>0.01</b>	<b>0.20</b>	<b>0.02</b>	<b>0.64</b>	<b>99.58</b>	<b>Ogoti Tuff</b>
	<b>σ</b>	<b>0.26</b>	<b>0.08</b>	<b>0.33</b>	<b>1.21</b>	<b>0.01</b>	<b>0.47</b>	<b>0.02</b>	<b>0.13</b>	<b>0.00</b>	<b>0.01</b>	<b>0.03</b>	<b>0.02</b>	<b>0.11</b>	<b>1.50</b>	
Gon05 273c*	Gon05273c-a	1.48	0.13	5.26	73.90	0.01	11.94	0.00	0.41	0.05	0.05	1.71	0.14	0.11	95.19	
vitric ash	Gon05273c-b	2.03	0.16	6.54	73.21	0.02	12.55	0.03	0.58	0.06	0.08	2.37	0.17	0.05	97.84	
n=17	Gon05273c-c	1.61	0.14	6.03	73.45	0.00	12.25	0.05	0.44	0.06	0.05	1.89	0.18	0.11	96.26	
	Gon05273c-d	1.77	0.00	5.95	75.16	0.00	12.46	0.02	0.42	0.06	0.05	1.85	0.16	0.07	97.97	

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
	Gon05273c-e	2.15	0.13	6.25	71.74	0.02	12.61	0.02	0.52	0.06	0.05	2.09	0.20	0.08	95.90	
	Gon05273c-f	2.36	0.16	6.43	73.41	0.03	12.92	0.15	0.61	0.06	0.09	2.36	0.20	0.00	98.79	
	Gon05273c-g	2.19	0.00	6.48	75.37	0.02	12.52	0.01	0.45	0.05	0.07	1.82	0.14	0.00	99.14	
	Gon05273c-h	8.20	0.05	2.68	63.04	0.00	20.13	0.00	2.52	0.01	0.04	0.28	0.00	0.91	97.85	feldspar
	Gon05273c-i	2.10	0.08	6.16	73.29	0.03	12.50	0.07	0.58	0.06	0.02	2.30	0.26	0.03	97.47	
	Gon05273c-j	1.58	0.00	5.82	73.36	0.02	12.57	0.04	0.40	0.07	0.02	1.83	0.13	0.09	95.93	
	Gon05273c-k	1.87	0.19	6.35	74.02	0.02	12.25	0.06	0.43	0.07	0.04	1.66	0.17	0.09	97.20	
	Gon05273c-l	7.18	0.00	5.09	66.74	0.01	20.92	0.00	0.96	0.00	0.02	0.22	0.00	0.61	101.74	feldspar
	Gon05273c-m	1.66	0.17	5.98	71.57	0.01	12.51	0.07	0.66	0.05	0.06	2.51	0.17	0.26	95.71	
	Gon05273c-n	2.23	0.11	6.32	73.32	0.01	12.55	0.04	0.37	0.05	0.03	1.62	0.15	0.00	96.82	
	Gon05273c-o	2.02	0.00	6.13	75.13	0.00	12.55	0.03	0.40	0.06	0.04	1.81	0.17	0.03	98.40	
	Gon05273c-p	2.90	0.05	4.70	72.52	0.05	13.03	0.13	0.88	0.04	0.09	3.13	0.27	0.13	97.93	high CaO
	Gon05273c-q	2.17	0.03	6.47	75.04	0.03	12.40	0.06	0.46	0.07	0.07	2.00	0.18	0.01	98.99	
	Gon05273c-r	2.01	0.00	6.18	74.94	0.01	12.37	0.00	0.41	0.07	0.05	1.78	0.13	0.00	97.93	
	Gon05273c-s	1.36	0.05	5.32	72.74	0.00	12.29	0.03	0.41	0.07	0.02	1.86	0.16	0.03	94.35	
	Gon05273c-t	2.06	0.16	6.32	73.44	0.02	12.31	0.00	0.44	0.07	0.02	1.76	0.13	0.00	96.73	
	<b>AVERAGE</b>	<b>1.92</b>	<b>0.09</b>	<b>6.12</b>	<b>73.71</b>	<b>0.01</b>	<b>12.44</b>	<b>0.04</b>	<b>0.47</b>	<b>0.06</b>	<b>0.05</b>	<b>1.95</b>	<b>0.17</b>	<b>0.06</b>	<b>97.10</b>	<b>Ogoti Tuff</b>
	<b>σ</b>	<b>0.29</b>	<b>0.07</b>	<b>0.37</b>	<b>1.14</b>	<b>0.01</b>	<b>0.21</b>	<b>0.04</b>	<b>0.09</b>	<b>0.01</b>	<b>0.02</b>	<b>0.27</b>	<b>0.03</b>	<b>0.07</b>	<b>1.40</b>	
Gon05 281 obsidian n=20	Gon05281-a	2.60	0.00	6.01	70.56	0.03	11.91	0.03	0.60	0.04	0.02	1.86	0.13	0.15	93.94	
	Gon05281-b	2.63	0.00	5.84	71.34	0.03	11.88	0.04	0.58	0.06	0.04	1.75	0.08	0.07	94.33	
	Gon05281-c	2.65	0.21	5.72	70.68	0.03	11.94	0.01	0.58	0.04	0.04	1.87	0.22	0.04	94.05	
	Gon05281-d	2.73	0.00	5.88	71.13	0.03	11.85	0.02	0.60	0.04	0.03	1.87	0.17	0.00	94.35	
	Gon05281-e	2.55	0.21	5.61	71.49	0.03	11.99	0.05	0.61	0.05	0.03	1.80	0.23	0.08	94.72	
	Gon05281-f	2.68	0.08	5.83	70.89	0.02	11.87	0.06	0.60	0.05	0.06	2.00	0.10	0.11	94.35	
	Gon05281-g	2.71	0.13	5.80	70.33	0.03	12.05	0.08	0.56	0.03	0.04	1.91	0.14	0.07	93.89	
	Gon05281-h	2.49	0.31	5.74	71.33	0.03	12.05	0.06	0.55	0.03	0.06	1.88	0.15	0.02	94.72	
	Gon05281-i	2.63	0.03	5.88	70.11	0.03	11.84	0.02	0.60	0.04	0.04	1.88	0.22	0.00	93.32	
	Gon05281-j	2.70	0.13	5.81	71.16	0.03	12.01	0.07	0.58	0.03	0.04	1.87	0.16	0.23	94.84	
	Gon05281-k	2.32	0.00	5.47	70.72	0.02	12.15	0.05	0.58	0.03	0.05	1.86	0.14	0.04	93.44	
	Gon05281-l	2.24	0.10	5.54	71.19	0.04	11.98	0.08	0.56	0.04	0.05	1.92	0.18	0.16	94.09	
	Gon05281-m	2.40	0.00	5.75	70.96	0.03	11.91	0.03	0.56	0.04	0.05	1.87	0.20	0.11	93.92	
	Gon05281-n	2.67	0.10	6.08	70.88	0.03	12.04	0.04	0.56	0.05	0.07	1.89	0.17	0.00	94.59	
	Gon05281-o	2.81	0.00	5.63	70.01	0.04	11.85	0.06	0.51	0.04	0.00	1.83	0.17	0.15	93.09	
	Gon05281-p	2.44	0.10	5.57	70.73	0.02	11.81	0.06	0.54	0.03	0.06	1.88	0.15	0.10	93.51	
	Gon05281-q	2.09	0.03	5.56	71.68	0.04	11.72	0.06	0.52	0.03	0.05	1.94	0.15	0.02	93.89	
	Gon05281-r	2.39	0.08	5.46	70.64	0.04	11.97	0.02	0.53	0.04	0.07	1.99	0.20	0.02	93.47	
	Gon05281-s	2.01	0.00	5.35	70.64	0.03	11.95	0.00	0.51	0.04	0.03	1.88	0.18	0.08	92.71	
	Gon05281-t	2.00	0.13	5.39	71.55	0.05	11.95	0.05	0.58	0.05	0.06	1.84	0.17	0.00	93.81	
	<b>AVERAGE</b>	<b>2.49</b>	<b>0.08</b>	<b>5.70</b>	<b>70.90</b>	<b>0.03</b>	<b>11.94</b>	<b>0.04</b>	<b>0.56</b>	<b>0.04</b>	<b>0.04</b>	<b>1.88</b>	<b>0.17</b>	<b>0.07</b>	<b>93.95</b>	
	<b>σ</b>	<b>0.24</b>	<b>0.09</b>	<b>0.20</b>	<b>0.46</b>	<b>0.01</b>	<b>0.10</b>	<b>0.02</b>	<b>0.03</b>	<b>0.01</b>	<b>0.02</b>	<b>0.06</b>	<b>0.04</b>	<b>0.07</b>	<b>0.57</b>	
Gon05 283*	Gon05283-a	2.08	0.00	6.43	73.81	0.02	11.75	0.03	0.45	0.04	0.05	1.67	0.07	0.00	96.40	

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
vitric ash n=15	Gon05283-b	0.33	0.00	0.00	51.74	16.01	2.61	0.00	20.19	0.01	0.19	7.17	0.72	0.00	98.96	Fe-Mg-Ti mineral
	Gon05283-c	1.80	0.19	6.21	76.58	0.02	12.22	0.00	0.34	0.02	0.01	1.24	0.10	0.05	98.78	
	Gon05283-d	4.68	0.06	0.11	53.79	0.25	28.54	0.01	11.76	0.00	0.00	0.81	0.15	0.00	100.16	feldspar
	Gon05283-e	0.30	0.01	0.05	50.66	16.68	2.67	0.00	20.17	0.00	0.21	7.19	0.84	0.00	98.78	Fe-Mg-Ti mineral
	Gon05283-f	2.13	0.09	6.48	76.86	0.01	12.24	0.04	0.37	0.05	0.00	1.56	0.15	0.02	100.01	
	Gon05283-g	2.14	0.00	6.47	75.07	0.04	12.12	0.00	0.36	0.00	0.05	1.64	0.15	0.00	98.05	
	Gon05283-i	1.91	0.00	6.05	73.54	0.02	11.91	0.05	0.36	0.03	0.03	1.53	0.15	0.09	95.68	
	Gon05283-j	1.96	0.00	6.32	75.34	0.00	11.71	0.03	0.40	0.04	0.06	1.66	0.12	0.00	97.66	
	Gon05283-l	1.96	0.00	6.02	74.29	0.01	11.58	0.03	0.48	0.04	0.07	1.74	0.17	0.05	96.46	
	Gon05283-m	1.66	0.05	6.27	74.63	0.02	11.46	0.05	0.34	0.04	0.02	1.60	0.15	0.00	96.30	
	Gon05283-n	1.96	0.13	5.80	73.72	0.02	12.11	0.05	0.37	0.05	0.03	1.43	0.13	0.05	95.85	
	Gon05283-o	2.14	0.18	6.46	75.04	0.03	11.53	0.00	0.37	0.04	0.02	1.47	0.08	0.00	97.37	
	Gon05283-p	1.83	0.00	5.68	69.07	0.07	11.48	0.00	0.68	0.03	0.04	1.67	0.19	0.04	90.79	
	Gon05283-q	1.98	0.05	6.61	74.45	0.02	12.09	0.04	0.38	0.05	0.06	1.44	0.13	0.00	97.31	
	Gon05283-r	2.06	0.10	6.40	73.25	0.01	11.47	0.07	0.35	0.04	0.04	1.58	0.13	0.03	95.53	
	Gon05283-s	2.13	0.00	6.28	76.95	0.02	11.94	0.05	0.34	0.02	0.03	1.67	0.07	0.03	99.54	
	Gon05283-t	1.93	0.00	6.63	75.62	0.03	11.93	0.05	0.36	0.05	0.03	1.55	0.14	0.00	98.32	
	<b>AVERAGE</b>	<b>1.98</b>	<b>0.05</b>	<b>6.27</b>	<b>74.55</b>	<b>0.02</b>	<b>11.84</b>	<b>0.03</b>	<b>0.40</b>	<b>0.04</b>	<b>0.04</b>	<b>1.56</b>	<b>0.13</b>	<b>0.02</b>	<b>96.94</b>	<b>Ogoti Tuff</b>
	<b>σ</b>	<b>0.14</b>	<b>0.07</b>	<b>0.28</b>	<b>1.92</b>	<b>0.02</b>	<b>0.29</b>	<b>0.02</b>	<b>0.09</b>	<b>0.01</b>	<b>0.02</b>	<b>0.13</b>	<b>0.04</b>	<b>0.03</b>	<b>2.19</b>	
Gon05 283*	Gon05283-k	7.56	0.00	4.44	65.44	0.00	20.71	0.02	1.25	0.02	0.02	0.21	0.01	0.62	100.29	
feldspar	Gon05283-h	7.06	0.07	5.09	63.47	0.01	19.46	0.00	0.80	0.01	0.01	0.28	0.04	0.54	96.84	
n=22	Gon05283-ph4	7.73	0.00	5.15	68.08	0.00	20.69	0.00	0.89	0.00	0.02	0.23	0.00	0.68	103.46	
	Gon05283-ph2	7.02	0.05	5.06	66.64	0.01	19.96	0.00	0.81	0.03	0.00	0.24	0.00	0.50	100.33	
	Gon05283-ph3	7.20	0.00	4.58	65.83	0.00	20.02	0.01	1.16	0.00	0.00	0.28	0.00	0.44	99.53	
	Gon05283ph-a	7.68	0.00	2.84	67.03	0.00	21.92	0.00	2.19	0.01	0.02	0.24	0.00	0.40	102.34	
	Gon05283ph-b	7.54	0.08	4.01	66.88	0.00	20.46	0.00	1.19	0.00	0.03	0.25	0.06	0.62	101.11	
	Gon05283ph-c	7.42	0.00	4.20	64.63	0.02	20.81	0.01	1.34	0.01	0.00	0.25	0.05	0.33	99.08	
	Gon05283ph-d	7.56	0.11	3.44	64.73	0.01	20.69	0.00	1.77	0.00	0.00	0.21	0.01	0.51	99.04	
	Gon05283ph-e	7.97	0.00	3.12	64.79	0.00	21.39	0.01	2.31	0.00	0.01	0.23	0.06	0.38	100.28	
	Gon05283ph-f	7.57	0.13	4.39	67.00	0.01	21.02	0.04	1.18	0.00	0.01	0.29	0.04	0.54	102.24	
	Gon05283ph-g	7.56	0.00	3.32	65.97	0.00	21.62	0.01	1.84	0.00	0.00	0.19	0.00	0.40	100.91	
	Gon05283ph-h	7.33	0.00	4.33	64.59	0.00	20.05	0.00	1.30	0.02	0.02	0.23	0.02	0.47	98.36	
	Gon05283ph-i	7.35	0.00	4.67	64.94	0.01	21.26	0.00	1.19	0.01	0.01	0.21	0.00	0.45	100.10	
	Gon05283ph-j	7.53	0.03	4.63	67.06	0.00	21.25	0.00	1.19	0.01	0.01	0.23	0.04	0.60	102.58	
	Gon05283ph-k	2.84	0.00	0.05	50.59	0.22	32.41	0.00	14.58	0.00	0.01	0.70	0.02	0.00	101.42	high CaO
	Gon05283ph-l	7.63	0.00	3.13	66.09	0.00	22.46	0.02	2.01	0.00	0.04	0.19	0.06	0.63	102.25	
	Gon05283ph-m	7.56	0.00	4.26	64.05	0.00	19.70	0.01	1.14	0.04	0.00	0.20	0.01	0.43	97.42	
	Gon05283ph-n	7.33	0.16	5.00	65.61	0.00	21.11	0.00	0.98	0.02	0.00	0.21	0.04	0.46	100.90	low CaO
Gon05283ph-o	7.71	0.00	3.99	66.09	0.01	22.03	0.00	1.25	0.02	0.02	0.22	0.00	0.48	101.84		
Gon05283ph-p	7.92	0.14	3.27	63.74	0.01	21.97	0.00	2.01	0.01	0.02	0.23	0.06	0.54	99.91		
Gon05283ph-q	7.55	0.10	4.10	60.90	0.00	21.07	0.02	1.28	0.00	0.00	0.23	0.00	0.50	95.76		
Gon05283ph-s	6.98	0.00	4.93	62.23	0.01	18.87	0.00	0.83	0.02	0.00	0.16	0.00	0.46	94.49	low total	

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)														Comments
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO	Total	
	Gon05283ph-r	8.07	0.00	3.14	66.20	0.00	21.71	0.00	2.00	0.02	0.00	0.27	0.02	0.42	101.84	
	Gon05283ph-t	7.39	0.06	3.67	63.95	0.00	20.59	0.00	1.66	0.01	0.00	0.21	0.00	0.71	98.26	
	<b>AVERAGE</b>	<b>7.54</b>	<b>0.04</b>	<b>4.04</b>	<b>65.37</b>	<b>0.00</b>	<b>20.95</b>	<b>0.01</b>	<b>1.44</b>	<b>0.01</b>	<b>0.01</b>	<b>0.23</b>	<b>0.02</b>	<b>0.51</b>	<b>100.17</b>	<b>Ogoti Tuff</b>
	<b>σ</b>	<b>0.26</b>	<b>0.05</b>	<b>0.72</b>	<b>1.57</b>	<b>0.01</b>	<b>0.79</b>	<b>0.01</b>	<b>0.45</b>	<b>0.01</b>	<b>0.01</b>	<b>0.03</b>	<b>0.02</b>	<b>0.10</b>	<b>1.97</b>	
Gon05 284a*	Gon05284aph-a	7.75	0.18	2.77	64.87	0.00	22.22	0.00	2.41	0.00	0.00	0.21	0.00	0.25	100.67	
feldspar	Gon05284aph-b	7.91	0.05	3.09	65.03	0.00	22.20	0.00	2.20	0.01	0.01	0.24	0.04	0.20	100.99	
n=17	Gon05284aph-c	7.29	0.00	4.87	65.89	0.00	21.20	0.00	1.16	0.00	0.00	0.19	0.00	0.54	101.16	
	Gon05284aph-d	8.12	0.16	2.93	65.54	0.01	22.47	0.04	2.47	0.01	0.00	0.27	0.00	0.36	102.38	
	Gon05284aph-e	8.03	0.06	4.07	66.39	0.02	21.77	0.00	1.60	0.07	0.02	0.19	0.04	0.47	102.71	
	Gon05284aph-f	7.82	0.13	4.84	65.58	0.00	21.05	0.00	1.12	0.00	0.00	0.25	0.00	0.43	101.24	
	<i>Gon05284aph-g</i>	<i>2.70</i>	<i>0.00</i>	<i>0.06</i>	<i>48.15</i>	<i>0.15</i>	<i>32.89</i>	<i>0.00</i>	<i>15.77</i>	<i>0.00</i>	<i>0.00</i>	<i>0.62</i>	<i>0.10</i>	<i>0.00</i>	<i>100.45</i>	high CaO
	Gon05284aph-h	7.80	0.00	3.82	66.55	0.00	21.99	0.00	1.70	0.00	0.00	0.25	0.00	0.48	102.58	
	Gon05284aph-i	7.61	0.06	4.37	66.02	0.00	20.89	0.00	1.31	0.00	0.01	0.24	0.03	0.29	100.83	
	Gon05284aph-j	8.17	0.00	4.16	64.57	0.01	20.67	0.00	1.28	0.00	0.00	0.25	0.00	0.62	99.74	
	Gon05284aph-k	7.59	0.03	4.67	66.38	0.01	21.54	0.00	1.25	0.00	0.02	0.26	0.00	0.54	102.29	
	Gon05284aph-l	7.89	0.00	4.60	66.70	0.01	21.79	0.00	1.24	0.00	0.00	0.27	0.00	0.71	103.20	
	Gon05284aph-m	7.85	0.05	4.47	66.11	0.01	21.24	0.03	1.30	0.00	0.00	0.24	0.00	0.64	101.96	
	Gon05284aph-n	8.13	0.00	3.61	66.36	0.00	21.43	0.00	1.47	0.02	0.01	0.19	0.00	0.48	101.71	
	<i>Gon05284aph-o</i>	<i>7.43</i>	<i>0.08</i>	<i>4.97</i>	<i>65.37</i>	<i>0.00</i>	<i>20.91</i>	<i>0.00</i>	<i>0.89</i>	<i>0.00</i>	<i>0.00</i>	<i>0.19</i>	<i>0.00</i>	<i>0.35</i>	<i>100.20</i>	low CaO
	Gon05284aph-p	8.29	0.05	3.57	65.24	0.01	22.51	0.01	2.07	0.00	0.01	0.20	0.03	0.51	102.50	
	Gon05284aph-q	7.73	0.00	3.33	66.13	0.02	21.84	0.00	2.16	0.00	0.01	0.26	0.00	0.56	102.05	
	<i>Gon05284aph-s</i>	<i>7.57</i>	<i>0.05</i>	<i>5.13</i>	<i>65.30</i>	<i>0.01</i>	<i>20.98</i>	<i>0.00</i>	<i>0.94</i>	<i>0.01</i>	<i>0.02</i>	<i>0.22</i>	<i>0.05</i>	<i>0.32</i>	<i>100.60</i>	low CaO
	Gon05284aph-r	7.96	0.02	2.95	63.89	0.01	21.32	0.00	2.22	0.01	0.00	0.21	0.00	0.51	99.11	
	Gon05284aph-t	8.34	0.08	3.13	65.75	0.00	22.66	0.00	2.09	0.05	0.03	0.26	0.02	0.41	102.82	
	<b>AVERAGE</b>	<b>7.90</b>	<b>0.05</b>	<b>3.84</b>	<b>65.71</b>	<b>0.01</b>	<b>21.69</b>	<b>0.00</b>	<b>1.71</b>	<b>0.01</b>	<b>0.01</b>	<b>0.23</b>	<b>0.01</b>	<b>0.47</b>	<b>101.64</b>	<b>Ogoti Tuff</b>
	<b>σ</b>	<b>0.27</b>	<b>0.06</b>	<b>0.72</b>	<b>0.77</b>	<b>0.01</b>	<b>0.59</b>	<b>0.01</b>	<b>0.48</b>	<b>0.02</b>	<b>0.01</b>	<b>0.03</b>	<b>0.02</b>	<b>0.14</b>	<b>1.13</b>	
Gon05 284b*	Gon05284b-a	2.22	0.21	6.00	76.22	0.02	12.37	0.04	0.51	0.05	0.05	1.82	0.17	0.06	99.76	
vitric ash	Gon05284b-b	3.25	0.05	4.57	74.84	0.01	12.67	0.06	0.75	0.03	0.06	2.48	0.28	0.00	99.05	
n=19	Gon05284b-c	1.34	0.00	5.52	75.54	0.01	12.13	0.04	0.50	0.04	0.04	1.75	0.14	0.04	97.10	
	<i>Gon05284b-d</i>	<i>7.83</i>	<i>0.00</i>	<i>2.95</i>	<i>65.99</i>	<i>0.00</i>	<i>22.37</i>	<i>0.00</i>	<i>2.33</i>	<i>0.01</i>	<i>0.03</i>	<i>0.29</i>	<i>0.00</i>	<i>0.53</i>	<i>102.35</i>	feldspar
	Gon05284b-e	1.76	0.02	5.90	75.83	0.02	11.78	0.01	0.36	0.06	0.03	1.52	0.13	0.00	97.42	
	<i>Gon05284b-f</i>	<i>1.34</i>	<i>0.06</i>	<i>5.76</i>	<i>74.04</i>	<i>0.02</i>	<i>11.32</i>	<i>0.00</i>	<i>0.40</i>	<i>0.05</i>	<i>0.04</i>	<i>1.56</i>	<i>0.48</i>	<i>0.00</i>	<i>95.07</i>	high TiO <sub>2</sub>
	Gon05284b-g	2.08	0.27	6.26	74.20	0.02	12.01	0.00	0.42	0.03	0.01	1.77	0.14	0.00	97.22	
	Gon05284b-i	2.08	0.00	6.16	74.27	0.02	12.25	0.04	0.45	0.04	0.05	1.60	0.17	0.03	97.17	
	Gon05284b-j	1.95	0.02	6.22	74.59	0.01	12.18	0.01	0.41	0.06	0.04	1.56	0.13	0.00	97.19	
	Gon05284b-k	1.93	0.13	5.98	74.98	0.02	12.36	0.00	0.45	0.03	0.03	1.67	0.11	0.00	97.70	
	Gon05284b-l	1.55	0.08	6.04	75.76	0.02	11.95	0.03	0.46	0.03	0.02	1.71	0.23	0.00	97.88	
	Gon05284b-m	2.08	0.13	5.89	74.49	0.02	12.41	0.00	0.47	0.03	0.07	1.86	0.11	0.12	97.68	
	Gon05284b-n	2.30	0.05	6.15	73.31	0.02	11.53	0.05	0.47	0.05	0.06	1.69	0.15	0.00	95.82	
	Gon05284b-ph1	1.94	0.00	6.07	70.10	0.04	11.66	0.09	0.49	0.05	0.08	1.74	0.16	0.00	92.45	
	Gon05284b-n	1.88	0.16	5.76	72.11	0.02	11.61	0.00	0.45	0.05	0.02	1.68	0.07	0.00	93.82	

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
	Gon05284b-o	2.02	0.03	6.09	73.17	0.03	12.03	0.02	0.47	0.04	0.08	1.74	0.07	0.00	95.78	
	Gon05284b-p	2.07	0.24	6.09	73.98	0.01	12.05	0.01	0.46	0.03	0.02	1.69	0.21	0.03	96.91	
	Gon05284b-q	2.59	0.00	5.69	76.01	0.01	12.41	0.04	0.50	0.04	0.03	1.87	0.15	0.10	99.43	
	Gon05284b-r	1.74	0.03	5.90	75.59	0.03	12.27	0.02	0.47	0.03	0.05	1.61	0.05	0.00	97.80	
	Gon05284b-s	1.96	0.16	6.09	74.55	0.02	12.02	0.00	0.37	0.04	0.03	1.56	0.17	0.00	96.99	
	Gon05284b-t	2.23	0.05	5.69	73.19	0.01	12.52	0.08	0.63	0.03	0.06	2.11	0.16	0.27	97.03	
	<b>AVERAGE</b>	<b>2.05</b>	<b>0.09</b>	<b>5.90</b>	<b>74.35</b>	<b>0.02</b>	<b>12.12</b>	<b>0.03</b>	<b>0.48</b>	<b>0.04</b>	<b>0.04</b>	<b>1.76</b>	<b>0.15</b>	<b>0.03</b>	<b>97.06</b>	<b>Ogoti Tuff</b>
	<b>σ</b>	<b>0.40</b>	<b>0.09</b>	<b>0.38</b>	<b>1.51</b>	<b>0.01</b>	<b>0.32</b>	<b>0.03</b>	<b>0.09</b>	<b>0.01</b>	<b>0.02</b>	<b>0.22</b>	<b>0.06</b>	<b>0.07</b>	<b>1.73</b>	
Gon05 284c*	Gon05284cpum-a	7.68	0.06	3.75	61.58	0.00	20.85	0.00	1.64	0.00	0.00	0.18	0.06	0.52	96.31	feldspar
pumice	Gon05284cpum-b	1.50	0.11	5.71	71.31	0.02	12.03	0.05	0.44	0.05	0.03	1.47	0.12	0.03	92.88	
n=19	Gon05284cpum-c	2.15	0.06	6.22	73.84	0.02	11.51	0.05	0.45	0.04	0.06	1.75	0.07	0.04	96.27	
	Gon05284cpum-d	2.08	0.02	6.14	74.09	0.02	11.94	0.02	0.45	0.06	0.07	1.68	0.13	0.02	96.72	
	Gon05284cpum-e	1.92	0.16	6.00	71.99	0.02	12.05	0.01	0.46	0.04	0.06	1.68	0.05	0.09	94.54	
	Gon05284cpum-f	1.99	0.29	6.17	73.03	0.01	11.93	0.00	0.47	0.05	0.05	1.69	0.16	0.03	95.85	
	Gon05284cpum-h	2.12	0.05	6.20	73.44	0.02	11.75	0.00	0.42	0.04	0.03	1.66	0.13	0.19	96.06	
	Gon05284cpum-i	2.22	0.00	5.79	74.38	0.03	12.16	0.00	0.44	0.03	0.06	1.61	0.20	0.00	96.93	
	Gon05284cpum-j	2.00	0.19	6.01	73.28	0.02	11.98	0.03	0.43	0.04	0.04	1.67	0.16	0.07	95.93	
	Gon05284cpum-k	2.08	0.11	6.04	72.30	0.02	12.02	0.00	0.43	0.05	0.04	1.69	0.15	0.16	95.09	
	Gon05284cpum-l	2.13	0.03	5.84	73.62	0.01	12.11	0.05	0.43	0.05	0.00	1.64	0.14	0.05	96.10	
	Gon05284cpum-m	2.10	0.03	6.04	73.66	0.02	12.09	0.00	0.45	0.06	0.03	1.59	0.14	0.05	96.25	
	Gon05284cpum-n	2.27	0.08	5.88	75.07	0.02	12.28	0.02	0.45	0.03	0.00	1.61	0.16	0.00	97.88	
	Gon05284cpum-o	2.24	0.00	5.82	72.99	0.01	11.94	0.02	0.45	0.04	0.03	1.76	0.15	0.00	95.47	
	Gon05284cpum-p	2.26	0.21	6.02	73.68	0.01	12.19	0.02	0.46	0.04	0.03	1.55	0.16	0.05	96.68	
	Gon05284cpum-q	1.54	0.02	5.68	71.74	0.02	11.81	0.00	0.45	0.04	0.05	1.67	0.12	0.08	93.22	
	Gon05284cpum-r	2.16	0.08	5.92	73.67	0.02	12.17	0.01	0.45	0.05	0.01	1.71	0.11	0.08	96.44	
	Gon05284cpum-s	2.16	0.00	6.07	73.52	0.02	11.99	0.03	0.44	0.04	0.01	1.63	0.15	0.10	96.18	
	Gon05284cpum-t	1.96	0.11	6.11	74.02	0.02	12.12	0.07	0.44	0.05	0.06	1.72	0.08	0.13	96.89	
	Gon05284cpum-u	2.20	0.21	6.16	75.83	0.02	12.46	0.01	0.45	0.05	0.03	1.70	0.18	0.02	99.33	
	<b>AVERAGE</b>	<b>2.06</b>	<b>0.09</b>	<b>5.99</b>	<b>73.45</b>	<b>0.02</b>	<b>12.03</b>	<b>0.02</b>	<b>0.44</b>	<b>0.04</b>	<b>0.04</b>	<b>1.66</b>	<b>0.13</b>	<b>0.06</b>	<b>96.04</b>	<b>Ogoti Tuff</b>
	<b>σ</b>	<b>0.21</b>	<b>0.08</b>	<b>0.16</b>	<b>1.10</b>	<b>0.01</b>	<b>0.20</b>	<b>0.02</b>	<b>0.01</b>	<b>0.01</b>	<b>0.02</b>	<b>0.07</b>	<b>0.04</b>	<b>0.05</b>	<b>1.46</b>	
Gon05 284d*	Gon05284d-a	2.16	0.26	6.34	72.94	0.03	11.58	0.05	0.37	0.04	0.05	1.49	0.05	0.00	95.36	
vitric ash	Gon05284d-b	1.65	0.00	5.86	73.19	0.01	12.08	0.02	0.40	0.06	0.08	1.59	0.15	0.09	95.21	
n=20	Gon05284d-c	2.13	0.06	6.26	73.02	0.02	12.64	0.00	0.43	0.04	0.04	1.67	0.19	0.17	96.66	
	Gon05284d-d	2.17	0.00	6.07	74.76	0.02	12.17	0.06	0.44	0.05	0.06	1.82	0.14	0.04	97.80	
	Gon05284d-e	1.78	0.00	6.14	73.74	0.02	12.35	0.05	0.46	0.05	0.03	1.82	0.09	0.22	96.75	
	Gon05284d-f	1.61	0.00	5.85	71.73	0.03	11.61	0.05	0.41	0.04	0.10	1.60	0.13	0.02	93.16	
	Gon05284d-g	2.19	0.00	5.93	74.08	0.03	12.31	0.05	0.48	0.03	0.05	1.87	0.10	0.00	97.13	
	Gon05284d-h	2.08	0.13	6.07	71.05	0.01	11.85	0.05	0.44	0.04	0.04	1.74	0.17	0.06	93.75	
	Gon05284d-i	2.01	0.23	6.13	73.29	0.03	12.09	0.00	0.45	0.04	0.06	1.70	0.15	0.04	96.22	
	Gon05284d-j	2.01	0.08	6.36	72.19	0.01	11.80	0.00	0.36	0.04	0.02	1.50	0.15	0.08	94.60	
	Gon05284d-k	1.52	0.00	5.61	71.81	0.02	11.02	0.01	0.40	0.05	0.03	1.88	0.13	0.00	92.50	



DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
	Gon05284d-l	2.00	0.05	6.22	72.06	0.02	12.09	0.05	0.44	0.05	0.05	1.72	0.15	0.00	94.91	
	Gon05284d-m	1.23	0.08	5.64	71.96	0.02	12.31	0.00	0.52	0.04	0.05	2.08	0.19	0.18	94.30	
	Gon05284d-n	1.65	0.02	5.88	73.69	0.01	11.80	0.06	0.44	0.05	0.05	1.75	0.10	0.15	95.65	
	Gon05284d-o	1.84	0.11	5.82	73.56	0.01	12.30	0.06	0.50	0.03	0.03	1.77	0.11	0.09	96.24	
	Gon05284d-p	1.96	0.13	6.07	73.39	0.03	12.05	0.04	0.42	0.04	0.02	1.66	0.16	0.00	95.95	
	Gon05284d-q	1.68	0.06	5.75	74.37	0.03	12.13	0.00	0.42	0.05	0.02	1.72	0.12	0.01	96.35	
	Gon05284d-r	1.55	0.00	5.70	72.66	0.03	11.65	0.04	0.37	0.04	0.04	1.54	0.08	0.06	93.77	
	Gon05284d-s	1.46	0.13	5.76	73.17	0.02	11.97	0.00	0.43	0.04	0.06	1.85	0.20	0.05	95.16	
	Gon05284d-t	2.01	0.02	6.00	72.99	0.01	11.71	0.03	0.42	0.05	0.03	1.44	0.13	0.10	94.96	
	<b>AVERAGE</b>	<b>1.84</b>	<b>0.07</b>	<b>5.97</b>	<b>72.98</b>	<b>0.02</b>	<b>11.98</b>	<b>0.03</b>	<b>0.43</b>	<b>0.04</b>	<b>0.04</b>	<b>1.71</b>	<b>0.13</b>	<b>0.07</b>	<b>95.32</b>	<b>Ogoti Tuff</b>
	<b>σ</b>	<b>0.28</b>	<b>0.08</b>	<b>0.23</b>	<b>0.96</b>	<b>0.01</b>	<b>0.36</b>	<b>0.02</b>	<b>0.04</b>	<b>0.01</b>	<b>0.02</b>	<b>0.16</b>	<b>0.04</b>	<b>0.07</b>	<b>1.37</b>	
Gon05 285	Gon05285-a	2.33	0.10	5.96	72.13	0.21	11.50	0.09	0.67	0.03	0.03	1.85	0.22	0.05	95.18	
obsidian	Gon05285-b	3.63	0.00	0.11	50.53	0.21	30.15	0.00	13.45	0.01	0.00	0.80	0.11	0.03	99.05	feldspar
n=13	Gon05285-c	3.65	0.11	0.07	51.25	0.17	29.53	0.03	13.46	0.00	0.00	0.90	0.08	0.08	99.32	feldspar
	Gon05285-d	3.30	0.00	2.76	59.50	2.44	13.18	0.01	5.68	0.02	0.12	8.42	1.42	0.00	96.86	Fe-Mg-Ti mineral
	Gon05285-e	2.80	0.03	6.35	71.04	0.18	11.79	0.05	0.47	0.04	0.02	2.06	0.40	0.00	95.23	
	Gon05285-f	2.67	0.00	6.28	72.24	0.15	11.46	0.05	0.59	0.03	0.02	1.77	0.08	0.02	95.35	
	Gon05285-g	2.75	0.05	5.98	72.38	0.17	11.51	0.03	0.58	0.03	0.07	1.88	0.34	0.03	95.80	
	Gon05285-h	3.65	0.00	0.57	51.45	4.95	14.89	0.00	10.62	0.00	0.21	10.23	2.22	0.00	98.79	Fe-Mg-Ti mineral
	Gon05285-i	3.31	0.00	1.97	59.68	2.51	12.93	0.04	5.27	0.01	0.13	7.99	1.07	0.00	94.92	Fe-Mg-Ti mineral
	Gon05285-j	1.80	0.21	5.65	72.05	0.20	11.58	0.07	0.58	0.03	0.06	2.06	0.17	0.03	94.51	
	Gon05285-k	2.83	0.03	5.18	71.12	0.19	11.62	0.02	0.62	0.04	0.04	1.91	0.13	0.00	93.73	
	Gon05285-l	2.48	0.05	6.46	71.00	0.16	11.70	0.05	0.59	0.04	0.02	2.03	0.42	0.06	95.07	
	Gon05285-m	3.56	0.00	4.97	73.51	0.09	12.31	0.02	0.54	0.03	0.08	19.23	0.13	0.15	114.61	machine error
	Gon05285-n	2.83	0.05	5.64	72.11	0.06	11.55	0.02	0.54	0.05	0.02	1.75	0.13	0.09	94.84	
	Gon05285-o	1.88	0.08	5.64	72.90	0.14	11.71	0.04	0.63	0.04	0.06	1.71	0.18	0.04	95.07	
	Gon05285-p	2.68	0.08	6.05	72.06	0.07	11.51	0.05	0.56	0.03	0.05	1.71	0.10	0.00	94.95	
	Gon05285-q	2.42	0.00	6.36	71.83	0.08	11.63	0.03	0.56	0.03	0.03	1.78	0.17	0.00	94.92	
	Gon05285-r	2.11	0.11	6.25	71.56	0.18	11.68	0.00	0.45	0.04	0.03	1.88	0.41	0.03	94.72	
	Gon05285-s	2.05	0.13	6.04	72.70	0.15	11.16	0.03	0.60	0.04	0.01	1.71	0.53	0.00	95.16	
	Gon05285-t	3.39	0.00	0.05	50.68	0.20	30.33	0.00	13.91	0.01	0.05	0.83	0.13	0.13	99.71	feldspar
	<b>AVERAGE</b>	<b>2.43</b>	<b>0.07</b>	<b>5.99</b>	<b>71.93</b>	<b>0.15</b>	<b>11.57</b>	<b>0.04</b>	<b>0.57</b>	<b>0.04</b>	<b>0.04</b>	<b>1.85</b>	<b>0.25</b>	<b>0.03</b>	<b>94.96</b>	
	<b>σ</b>	<b>0.37</b>	<b>0.06</b>	<b>0.37</b>	<b>0.61</b>	<b>0.05</b>	<b>0.16</b>	<b>0.02</b>	<b>0.06</b>	<b>0.01</b>	<b>0.02</b>	<b>0.13</b>	<b>0.15</b>	<b>0.03</b>	<b>0.49</b>	
Gon05 286a*	Gon05286A-a	2.23	0.00	6.25	74.09	0.03	11.84	0.00	0.50	0.03	0.02	1.65	0.17	0.06	96.87	
vitric ash	Gon05286A-b	2.32	0.00	6.05	73.72	0.03	12.03	0.01	0.49	0.05	0.04	1.64	0.13	0.00	96.50	
n=20	Gon05286A-c	2.58	0.00	6.27	75.18	0.03	11.95	0.02	0.48	0.04	0.05	1.70	0.21	0.09	98.59	
	Gon05286A-d	2.65	0.08	6.28	75.60	0.03	12.19	0.04	0.48	0.04	0.06	1.85	0.07	0.00	99.37	
	Gon05286A-e	1.93	0.00	5.79	74.35	0.04	12.30	0.02	0.48	0.04	0.07	1.75	0.14	0.05	96.95	
	Gon05286A-f	2.49	0.00	6.17	75.39	0.02	12.27	0.08	0.47	0.04	0.07	1.78	0.09	0.07	98.94	
	Gon05286A-g	2.17	0.08	5.78	75.43	0.03	12.20	0.05	0.49	0.05	0.04	1.78	0.16	0.09	98.34	
	Gon05286A-h	2.41	0.00	6.00	74.37	0.03	12.24	0.05	0.46	0.05	0.05	1.74	0.21	0.00	97.60	

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
	Gon05286A-i	2.24	0.26	6.34	75.56	0.04	12.02	0.02	0.46	0.04	0.06	1.75	0.07	0.00	98.85	
	Gon05286A-j	2.42	0.14	6.24	73.60	0.02	12.33	0.00	0.46	0.03	0.06	1.73	0.13	0.01	97.18	
	Gon05286A-k	2.39	0.00	6.11	74.98	0.02	12.23	0.03	0.45	0.06	0.04	1.78	0.17	0.00	98.27	
	Gon05286A-l	2.33	0.00	6.28	74.67	0.03	12.08	0.04	0.47	0.03	0.06	1.69	0.10	0.11	97.90	
	Gon05286A-m	1.80	0.13	5.75	74.12	0.03	11.86	0.00	0.47	0.03	0.06	1.71	0.16	0.00	96.12	
	Gon05286A-n	2.43	0.05	6.21	74.95	0.03	12.12	0.08	0.44	0.05	0.06	1.72	0.16	0.00	98.31	
	Gon05286A-o	2.22	0.00	5.92	75.26	0.02	12.33	0.08	0.48	0.04	0.05	1.69	0.06	0.02	98.15	
	Gon05286A-p	1.77	0.11	5.78	75.58	0.03	12.31	0.03	0.47	0.04	0.04	1.72	0.10	0.09	98.05	
	Gon05286A-q	1.97	0.02	5.82	76.09	0.03	12.01	0.04	0.47	0.03	0.05	1.71	0.10	0.04	98.38	
	Gon05286A-r	2.73	0.00	6.03	75.61	0.03	12.18	0.00	0.51	0.04	0.02	1.77	0.14	0.00	99.06	
	Gon05286A-s	2.34	0.03	6.47	74.20	0.01	12.02	0.01	0.48	0.05	0.05	1.72	0.18	0.09	97.64	
	Gon05286A-t	1.78	0.00	5.87	75.44	0.02	12.00	0.07	0.47	0.03	0.02	1.71	0.11	0.00	97.52	
	<b>AVERAGE</b>	<b>2.26</b>	<b>0.05</b>	<b>6.07</b>	<b>74.91</b>	<b>0.03</b>	<b>12.13</b>	<b>0.03</b>	<b>0.47</b>	<b>0.04</b>	<b>0.05</b>	<b>1.73</b>	<b>0.13</b>	<b>0.04</b>	<b>97.93</b>	<b>Ogoti Tuff</b>
	<b>σ</b>	<b>0.28</b>	<b>0.07</b>	<b>0.22</b>	<b>0.72</b>	<b>0.01</b>	<b>0.15</b>	<b>0.03</b>	<b>0.02</b>	<b>0.01</b>	<b>0.01</b>	<b>0.05</b>	<b>0.05</b>	<b>0.04</b>	<b>0.88</b>	
Gon05 286a*	Gon05286aph-a	7.44	0.00	3.66	63.84	0.00	21.86	0.00	1.94	0.00	0.00	0.23	0.00	0.53	99.50	
feldspar	Gon05286aph-b	7.77	0.03	3.69	66.42	0.01	21.75	0.00	1.65	0.00	0.02	0.19	0.01	0.71	102.24	
n=18	Gon05286aph-c	8.34	0.13	2.84	63.88	0.00	21.01	0.00	2.29	0.01	0.01	0.21	0.05	0.50	99.28	
	Gon05286aph-d	8.44	0.08	3.03	68.83	0.01	22.14	0.00	2.14	0.01	0.02	0.21	0.01	0.37	105.29	
	Gon05286aph-e	8.26	0.12	3.58	67.99	0.01	21.24	0.01	1.44	0.00	0.00	0.21	0.04	0.56	103.46	
	Gon05286aph-f	8.55	0.00	2.67	66.56	0.01	22.15	0.00	2.25	0.00	0.00	0.32	0.03	0.50	103.04	
	<i>Gon05286aph-g</i>	<i>7.74</i>	<i>0.08</i>	<i>3.47</i>	<i>60.21</i>	<i>0.00</i>	<i>20.65</i>	<i>0.00</i>	<i>1.69</i>	<i>0.01</i>	<i>0.00</i>	<i>0.29</i>	<i>0.00</i>	<i>0.55</i>	<i>94.70</i>	low SiO <sub>2</sub>
	Gon05286aph-h	7.95	0.00	3.06	64.78	0.00	22.44	0.00	2.41	0.00	0.00	0.20	0.01	0.55	101.41	
	Gon05286aph-i	7.67	0.00	4.18	66.25	0.00	21.17	0.01	1.28	0.00	0.02	0.27	0.00	0.37	101.23	
	Gon05286aph-j	7.80	0.00	3.38	66.27	0.00	21.28	0.00	1.92	0.00	0.00	0.21	0.00	0.40	101.25	
	Gon05286aph-k	8.25	0.05	3.47	66.49	0.00	21.59	0.00	1.67	0.00	0.00	0.24	0.02	0.50	102.28	
	<i>Gon05286aph-l</i>	<i>7.45</i>	<i>0.00</i>	<i>2.86</i>	<i>60.79</i>	<i>0.00</i>	<i>19.94</i>	<i>0.00</i>	<i>2.05</i>	<i>0.02</i>	<i>0.00</i>	<i>0.19</i>	<i>0.01</i>	<i>0.46</i>	<i>93.77</i>	low total
	Gon05286aph-m	7.88	0.00	3.04	67.04	0.00	22.04	0.00	2.03	0.00	0.00	0.25	0.06	0.37	102.72	
	Gon05286aph-n	8.04	0.04	2.70	66.53	0.00	22.83	0.00	2.52	0.00	0.00	0.23	0.00	0.40	103.30	
	Gon05286aph-o	8.31	0.00	3.12	64.78	0.00	21.84	0.02	2.27	0.00	0.00	0.24	0.03	0.54	101.18	
	Gon05286aph-p	7.62	0.08	2.49	62.35	0.01	20.93	0.01	2.75	0.02	0.00	0.22	0.01	0.27	96.76	
	Gon05286aph-q	8.01	0.00	2.77	66.91	0.00	22.35	0.00	2.38	0.00	0.01	0.22	0.03	0.34	103.03	
	Gon05286aph-r	7.31	0.00	2.71	63.71	0.00	19.01	0.00	2.09	0.02	0.00	0.23	0.06	0.28	95.43	
	Gon05286aph-s	8.16	0.00	2.85	65.41	0.00	22.68	0.00	2.43	0.00	0.00	0.25	0.00	0.47	102.25	
	Gon05286aph-t	7.50	0.00	3.50	65.05	0.01	19.84	0.01	1.63	0.03	0.00	0.22	0.04	0.64	98.47	
	<b>AVERAGE</b>	<b>7.96</b>	<b>0.03</b>	<b>3.15</b>	<b>65.73</b>	<b>0.00</b>	<b>21.56</b>	<b>0.00</b>	<b>2.06</b>	<b>0.01</b>	<b>0.00</b>	<b>0.23</b>	<b>0.02</b>	<b>0.46</b>	<b>101.23</b>	<b>Ogoti Tuff</b>
	<b>σ</b>	<b>0.36</b>	<b>0.04</b>	<b>0.45</b>	<b>1.64</b>	<b>0.00</b>	<b>0.97</b>	<b>0.01</b>	<b>0.40</b>	<b>0.01</b>	<b>0.01</b>	<b>0.03</b>	<b>0.02</b>	<b>0.12</b>	<b>2.49</b>	
Gon05 286b*	Gon05286b-a	1.91	0.00	5.80	71.60	0.11	11.87	0.04	0.49	0.02	0.05	1.44	0.15	0.05	93.53	
obsidian clast	<i>Gon05286b-b</i>	<i>1.90</i>	<i>0.00</i>	<i>6.06</i>	<i>70.72</i>	<i>0.35</i>	<i>12.15</i>	<i>0.06</i>	<i>0.92</i>	<i>0.03</i>	<i>0.04</i>	<i>2.48</i>	<i>0.34</i>	<i>0.08</i>	<i>95.15</i>	high CaO
n=16	Gon05286b-c	1.67	0.00	5.20	71.82	0.10	12.16	0.06	0.50	0.04	0.02	1.57	0.26	0.09	93.51	
	<i>Gon05286b-d</i>	<i>2.88</i>	<i>0.00</i>	<i>1.61</i>	<i>54.29</i>	<i>3.82</i>	<i>12.06</i>	<i>0.04</i>	<i>8.03</i>	<i>0.01</i>	<i>0.21</i>	<i>9.76</i>	<i>1.74</i>	<i>0.00</i>	<i>94.45</i>	Fe-Mg-Ti mineral
	<i>Gon05286b-e</i>	<i>2.84</i>	<i>0.10</i>	<i>2.88</i>	<i>61.41</i>	<i>2.32</i>	<i>12.77</i>	<i>0.04</i>	<i>4.71</i>	<i>0.03</i>	<i>0.11</i>	<i>6.14</i>	<i>1.13</i>	<i>0.00</i>	<i>94.47</i>	Fe-Mg-Ti mineral

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
	Gon05286b-f	1.80	0.00	5.67	74.22	0.11	12.02	0.04	0.52	0.03	0.03	1.42	0.14	0.06	96.05	
	Gon05286b-g	1.86	0.00	3.94	65.65	0.39	9.64	0.00	1.33	0.04	0.04	5.60	0.66	0.12	89.27	high CaO
	Gon05286b-h	3.74	0.00	0.48	47.83	4.87	12.69	0.02	9.93	0.01	0.23	13.14	2.36	0.00	95.31	Fe-Mg-Ti mineral
	Gon05286b-i	1.83	0.00	6.16	72.38	0.03	11.87	0.06	0.54	0.04	0.03	1.63	0.21	0.00	94.77	
	Gon05286b-j	1.94	0.08	5.85	70.96	0.03	11.22	0.05	0.46	0.04	0.03	1.87	0.14	0.08	92.76	
	Gon05286b-k	1.99	0.02	5.74	69.94	0.04	11.87	0.02	0.54	0.03	0.04	1.80	0.17	0.03	92.25	
	Gon05286b-l	2.58	0.00	5.05	74.01	0.02	12.00	0.05	0.34	0.03	0.01	2.32	0.13	0.00	96.55	
	Gon05286b-m	2.00	0.00	5.43	73.22	0.02	12.18	0.04	0.55	0.05	0.04	1.68	0.19	0.09	95.47	
	Gon05286b-n	2.16	0.08	5.89	72.94	0.02	11.98	0.01	0.51	0.04	0.02	1.71	0.12	0.12	95.60	
	Gon05286b-o	2.10	0.05	5.45	72.45	0.02	11.96	0.04	0.43	0.05	0.06	1.75	0.15	0.03	94.54	
	Gon05286b-p	2.19	0.00	5.79	72.98	0.03	11.30	0.01	0.41	0.04	0.02	1.58	0.13	0.07	94.55	
	Gon05286b-q	2.50	0.23	4.77	72.13	0.03	11.96	0.04	0.49	0.05	0.03	1.51	0.18	0.00	93.94	
	Gon05286b-r	1.82	0.24	5.40	72.60	0.01	11.96	0.04	0.50	0.03	0.04	2.46	0.13	0.08	95.31	
	Gon05286b-s	2.01	0.19	5.62	70.09	0.01	11.41	0.06	0.43	0.07	0.05	1.72	0.14	0.09	91.88	
	Gon05286b-t	2.28	0.00	5.72	73.01	0.01	11.95	0.02	0.43	0.03	0.05	1.90	0.24	0.00	95.65	
	Gon05286b-u	2.43	0.00	4.72	69.10	0.03	11.64	0.06	0.47	0.05	0.07	1.55	0.13	0.07	90.31	
	<b>AVERAGE</b>	<b>2.08</b>	<b>0.06</b>	<b>5.52</b>	<b>72.09</b>	<b>0.04</b>	<b>11.83</b>	<b>0.04</b>	<b>0.48</b>	<b>0.04</b>	<b>0.04</b>	<b>1.74</b>	<b>0.16</b>	<b>0.05</b>	<b>94.17</b>	<b>Ogoti Tuff</b>
	<b>σ</b>	<b>0.27</b>	<b>0.09</b>	<b>0.41</b>	<b>1.45</b>	<b>0.03</b>	<b>0.29</b>	<b>0.02</b>	<b>0.06</b>	<b>0.01</b>	<b>0.02</b>	<b>0.29</b>	<b>0.04</b>	<b>0.04</b>	<b>1.71</b>	
Gon05 286c*	Gon05286c-a	7.65	0.05	4.05	63.56	0.00	19.76	0.00	1.34	0.01	0.02	0.27	0.04	0.46	97.22	
feldspar	Gon05286c-b	7.86	0.18	4.14	64.93	0.01	20.44	0.00	1.24	0.01	0.00	0.21	0.00	0.35	99.38	
n=19	Gon05286c-c	8.43	0.00	3.03	63.95	0.01	21.42	0.00	2.41	0.00	0.02	0.28	0.03	0.55	100.13	
	Gon05286c-d	7.84	0.08	2.93	61.22	0.00	21.18	0.00	2.44	0.00	0.02	0.20	0.00	0.41	96.35	
	Gon05286c-e	8.88	0.00	2.72	65.12	0.02	20.80	0.00	2.41	0.02	0.01	0.23	0.00	0.28	100.48	
	Gon05286c-f	8.20	0.13	2.58	62.18	0.00	20.43	0.00	2.36	0.01	0.00	0.27	0.01	0.20	96.37	
	Gon05286c-g	7.94	0.00	3.19	63.99	0.01	20.89	0.01	2.03	0.00	0.00	0.27	0.05	0.54	98.94	
	Gon05286c-h	8.40	0.16	3.24	64.48	0.00	21.28	0.01	2.02	0.00	0.00	0.24	0.00	0.25	100.09	
	Gon05286c-i	7.85	0.00	1.73	61.43	0.00	21.83	0.02	3.26	0.01	0.00	0.28	0.00	0.09	96.50	
	Gon05286c-k	8.51	0.06	2.38	63.59	0.01	21.30	0.00	2.47	0.02	0.01	0.21	0.03	0.48	99.07	
	Gon05286c-l	8.01	0.00	2.90	62.67	0.01	21.43	0.00	2.14	0.01	0.00	0.29	0.01	0.40	97.88	
	Gon05286c-m	8.06	0.00	3.68	63.83	0.00	20.36	0.04	1.74	0.00	0.02	0.24	0.02	0.40	98.39	
	Gon05286c-n	8.49	0.00	2.91	62.92	0.01	21.26	0.02	2.43	0.01	0.00	0.25	0.00	0.50	98.80	
	Gon05286c-o	8.35	0.00	3.03	64.47	0.01	21.13	0.00	2.29	0.01	0.00	0.27	0.02	0.55	100.13	
	Gon05286c-p	8.57	0.15	3.00	64.07	0.00	21.90	0.00	2.21	0.00	0.00	0.22	0.02	0.48	100.63	
	Gon05286c-q	8.10	0.08	3.06	62.29	0.00	20.66	0.01	2.31	0.00	0.02	0.19	0.05	0.43	97.19	
	Gon05286c-r	7.78	0.07	2.92	61.84	0.00	20.68	0.00	2.41	0.00	0.00	0.29	0.05	0.27	96.32	
	Gon05286c-s	8.65	0.00	3.08	63.05	0.02	22.16	0.03	2.03	0.00	0.00	0.27	0.00	0.29	99.58	
	Gon05286c-t	8.87	0.09	3.38	66.30	0.02	20.78	0.00	1.80	0.00	0.01	0.24	0.04	0.47	102.01	
	<b>AVERAGE</b>	<b>8.23</b>	<b>0.06</b>	<b>3.05</b>	<b>63.47</b>	<b>0.01</b>	<b>21.04</b>	<b>0.01</b>	<b>2.18</b>	<b>0.01</b>	<b>0.01</b>	<b>0.25</b>	<b>0.02</b>	<b>0.39</b>	<b>98.71</b>	<b>Ogoti Tuff</b>
	<b>σ</b>	<b>0.37</b>	<b>0.06</b>	<b>0.55</b>	<b>1.33</b>	<b>0.01</b>	<b>0.59</b>	<b>0.01</b>	<b>0.45</b>	<b>0.01</b>	<b>0.01</b>	<b>0.03</b>	<b>0.02</b>	<b>0.13</b>	<b>1.70</b>	
Gon05 287	Gon05287-a	2.50	0.21	6.07	71.36	0.03	11.23	0.04	0.45	0.03	0.03	1.68	0.15	0.00	93.79	
obsidian	Gon05287-b	2.50	0.00	5.77	71.78	0.04	11.28	0.04	0.46	0.05	0.00	2.23	0.15	0.16	94.46	

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments		
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total	
n=20	Gon05287-c	2.41	0.03	5.90	72.03	0.03	11.30	0.02	0.45	0.05	0.02	1.60	0.13	0.08	94.04		
	Gon05287-d	2.69	0.00	5.87	72.42	0.04	11.48	0.01	0.46	0.05	0.05	1.66	0.13	0.11	94.96		
	Gon05287-e	2.90	0.05	5.57	72.42	0.04	11.53	0.08	0.41	0.03	0.03	1.47	0.14	0.06	94.74		
	Gon05287-f	1.95	0.05	5.59	72.59	0.06	11.36	0.04	0.47	0.04	0.05	1.45	0.08	0.00	93.74		
	Gon05287-g	2.31	0.03	6.21	71.95	0.04	11.33	0.02	0.47	0.03	0.06	1.61	0.19	0.13	94.36		
	Gon05287-h	2.35	0.13	6.06	71.39	0.03	11.31	0.05	0.45	0.03	0.06	1.78	0.12	0.00	93.75		
	Gon05287-i	1.54	0.13	5.44	72.53	0.09	11.57	0.06	0.44	0.02	0.03	1.31	0.14	0.04	93.34		
	Gon05287-j	2.26	0.03	5.87	72.00	0.01	11.46	0.04	0.40	0.04	0.08	1.31	0.16	0.08	93.73		
	Gon05287-k	2.52	0.08	6.17	71.96	0.03	11.33	0.04	0.42	0.03	0.02	1.40	0.15	0.00	94.15		
	Gon05287-l	1.97	0.00	5.80	72.34	0.04	11.49	0.01	0.42	0.04	0.03	1.41	0.10	0.00	93.67		
	Gon05287-m	2.36	0.11	5.90	72.29	0.01	11.19	0.03	0.38	0.04	0.04	1.18	0.13	0.00	93.66		
	Gon05287-n	2.02	0.24	5.84	72.68	0.02	10.87	0.03	0.36	0.04	0.03	1.49	0.12	0.09	93.83		
	Gon05287-o	2.33	0.21	6.20	72.31	0.04	11.50	0.05	0.41	0.04	0.02	1.46	0.17	0.06	94.81		
	Gon05287-p	2.29	0.08	6.30	71.76	0.03	11.40	0.01	0.41	0.04	0.06	1.44	0.11	0.00	93.94		
	Gon05287-q	1.92	0.08	5.61	72.55	0.02	11.23	0.00	0.37	0.05	0.03	1.28	0.07	0.00	93.22		
	Gon05287-r	2.48	0.00	6.34	72.07	0.02	11.20	0.03	0.41	0.04	0.05	1.41	0.08	0.01	94.13		
	Gon05287-s	2.80	0.21	5.91	72.43	0.03	11.10	0.03	0.39	0.08	0.03	1.39	0.07	0.04	94.51		
	Gon05287-t	2.86	0.03	5.51	71.84	0.03	11.18	0.04	0.37	0.06	0.04	1.42	0.15	0.00	93.53		
		<b>AVERAGE</b>	<b>2.35</b>	<b>0.08</b>	<b>5.90</b>	<b>72.13</b>	<b>0.03</b>	<b>11.32</b>	<b>0.03</b>	<b>0.42</b>	<b>0.04</b>	<b>0.04</b>	<b>1.50</b>	<b>0.13</b>	<b>0.04</b>	<b>94.02</b>	
		<b>σ</b>	<b>0.34</b>	<b>0.08</b>	<b>0.27</b>	<b>0.38</b>	<b>0.02</b>	<b>0.17</b>	<b>0.02</b>	<b>0.03</b>	<b>0.01</b>	<b>0.02</b>	<b>0.23</b>	<b>0.04</b>	<b>0.05</b>	<b>0.49</b>	
Gon05 300	Gon05300-a	1.12	0.10	1.53	47.41	0.21	8.58	0.00	0.94	0.40	0.10	1.93	0.31	0.07	62.69	low total	
vitric ash	Gon05300-b	1.72	0.06	2.25	66.62	0.26	12.50	0.06	1.17	0.05	0.11	3.18	0.33	0.06	88.37	low total	
n=11	Gon05300-c	1.95	0.06	1.78	68.16	0.31	12.58	0.05	1.41	0.05	0.15	3.39	0.36	0.11	90.36		
	Gon05300-d	1.81	0.16	1.87	67.54	0.29	13.13	0.12	1.26	0.04	0.12	3.26	0.44	0.00	90.04		
	Gon05300-e	1.51	0.05	1.89	66.19	0.32	12.64	0.08	1.42	0.05	0.16	3.45	0.35	0.06	88.17	low total	
	Gon05300-f	1.80	0.08	1.58	65.48	0.27	10.78	0.07	1.32	0.05	0.15	3.42	0.42	0.05	85.46	low total	
	Gon05300-g	1.79	0.07	1.43	69.04	0.37	13.75	0.06	1.39	0.07	0.17	3.53	0.38	0.04	92.07		
	Gon05300-h	1.38	0.10	1.77	65.97	0.36	12.81	0.04	1.43	0.05	0.13	3.49	0.32	0.00	87.86	low total	
	Gon05300-i	7.99	0.10	2.32	66.09	0.02	22.60	0.00	3.12	0.01	0.00	0.54	0.02	0.37	103.17	feldspar	
	Gon05300-j	1.85	0.00	1.98	66.42	0.18	12.16	0.03	1.00	0.07	0.11	2.88	0.29	0.06	87.02	low total	
	Gon05300-k	0.67	0.00	1.04	50.55	0.14	11.05	0.10	0.92	0.05	0.12	2.93	0.28	0.00	67.84	low total	
	Gon05300-l	1.45	0.05	2.02	68.26	0.28	12.21	0.04	1.15	0.03	0.13	2.84	0.46	0.05	88.97		
	Gon05300-m	2.14	0.00	2.05	69.82	0.18	13.04	0.09	0.99	0.04	0.11	2.88	0.37	0.02	91.73		
Gon05300-n	1.91	0.00	2.23	68.67	0.31	13.48	0.10	1.21	0.06	0.14	3.36	0.38	0.00	91.86			
Gon05300-o	2.47	0.12	2.80	73.63	0.01	12.86	0.07	0.74	0.04	0.04	2.35	0.19	0.09	95.41	low FeO, CaO		
Gon05300-p	1.73	0.00	1.88	66.36	0.32	13.14	0.08	1.34	0.05	0.12	3.51	0.30	0.04	88.88			
Gon05300-q	1.32	0.00	1.87	66.88	0.33	12.95	0.14	1.39	0.04	0.11	3.44	0.42	0.10	88.99			
Gon05300-r	1.45	0.00	2.13	65.93	0.34	12.93	0.14	1.33	0.04	0.16	3.66	0.44	0.00	88.55			
Gon05300-s	1.70	0.07	2.06	66.62	0.34	13.16	0.12	1.27	0.05	0.13	3.43	0.41	0.05	89.42			
Gon05300-t	1.64	0.00	1.96	65.85	0.35	13.32	0.11	1.36	0.06	0.11	3.20	0.36	0.00	88.32	low total		
	<b>AVERAGE</b>	<b>1.69</b>	<b>0.05</b>	<b>1.92</b>	<b>67.57</b>	<b>0.31</b>	<b>13.02</b>	<b>0.09</b>	<b>1.29</b>	<b>0.05</b>	<b>0.13</b>	<b>3.34</b>	<b>0.39</b>	<b>0.04</b>	<b>89.88</b>		
	<b>σ</b>	<b>0.26</b>	<b>0.05</b>	<b>0.22</b>	<b>1.32</b>	<b>0.05</b>	<b>0.41</b>	<b>0.04</b>	<b>0.13</b>	<b>0.01</b>	<b>0.02</b>	<b>0.26</b>	<b>0.05</b>	<b>0.04</b>	<b>1.45</b>		

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
Gon05 301 vitric ash n=18	Gon05301a	3.36	0.00	3.60	71.03	0.02	13.27	0.07	1.16	0.05	0.06	2.29	0.10	0.09	95.10	
	Gon05301b	3.00	0.03	3.81	71.04	0.02	13.24	0.00	1.16	0.05	0.05	2.22	0.11	0.09	94.82	
	Gon05301c	3.67	0.00	3.78	73.08	0.03	13.03	0.04	0.95	0.04	0.07	1.98	0.06	0.11	96.85	
	Gon05301d	2.71	0.00	3.87	71.20	0.02	12.80	0.04	0.96	0.05	0.06	1.84	0.16	0.02	93.74	
	Gon05301e	3.19	0.13	3.87	71.73	0.01	13.47	0.09	1.18	0.04	0.11	2.27	0.15	0.00	96.24	
	Gon05301f	3.47	0.05	3.98	71.71	0.04	13.11	0.00	1.00	0.04	0.07	1.97	0.12	0.00	95.57	
	Gon05301g	2.59	0.28	3.93	71.58	0.04	13.14	0.01	1.17	0.05	0.11	2.28	0.17	0.10	95.44	
	Gon05301h	3.38	0.16	4.18	71.57	0.02	13.14	0.01	0.94	0.04	0.06	1.94	0.14	0.04	95.63	
	Gon05301i	2.79	0.03	3.79	71.92	0.02	12.94	0.00	0.95	0.05	0.09	1.82	0.20	0.11	94.72	
	Gon05301j	3.50	0.08	4.08	72.23	0.01	13.07	0.00	0.96	0.04	0.05	1.79	0.11	0.00	95.92	
	Gon05301k	3.31	0.18	3.88	72.19	0.04	12.93	0.03	0.99	0.04	0.05	1.86	0.11	0.13	95.74	
	Gon05301l	2.76	0.08	3.67	71.97	0.02	12.92	0.04	0.99	0.04	0.03	1.88	0.12	0.03	94.54	
	Gon05301m	3.33	0.18	3.73	72.24	0.03	13.08	0.00	0.93	0.05	0.06	2.01	0.13	0.12	95.90	
	Gon05301n	3.20	0.08	3.92	71.69	0.02	12.80	0.06	0.98	0.04	0.04	1.92	0.15	0.00	94.90	
	Gon05301o	3.13	0.00	4.09	72.84	0.01	13.19	0.03	0.95	0.04	0.05	1.91	0.11	0.02	96.38	
	Gon05301p	3.41	0.00	3.62	71.53	0.02	13.23	0.05	1.11	0.04	0.04	2.23	0.08	0.16	95.53	
	Gon05301q	3.47	0.10	3.97	72.68	0.03	13.11	0.02	0.94	0.05	0.06	1.92	0.14	0.00	96.49	
	Gon05301r	3.24	0.03	3.99	72.00	0.02	13.14	0.00	0.98	0.04	0.03	1.92	0.16	0.13	95.68	
	<b>AVERAGE</b>	<b>3.20</b>	<b>0.08</b>	<b>3.88</b>	<b>71.90</b>	<b>0.02</b>	<b>13.09</b>	<b>0.03</b>	<b>1.02</b>	<b>0.04</b>	<b>0.06</b>	<b>2.00</b>	<b>0.13</b>	<b>0.06</b>	<b>95.51</b>	
	<b>σ</b>	<b>0.31</b>	<b>0.08</b>	<b>0.16</b>	<b>0.58</b>	<b>0.01</b>	<b>0.17</b>	<b>0.03</b>	<b>0.09</b>	<b>0.01</b>	<b>0.02</b>	<b>0.17</b>	<b>0.03</b>	<b>0.06</b>	<b>0.77</b>	
Gon05 302 vitric ash n=12	Gon05302a	2.68	0.21	3.51	74.28	0.04	11.92	0.05	0.42	0.12	0.08	2.10	0.12	0.02	95.54	
	Gon05302b	2.76	0.00	3.61	76.64	0.04	12.40	0.01	0.40	0.11	0.10	2.09	0.10	0.00	98.27	
	Gon05302c	3.03	0.03	3.92	74.26	0.02	12.56	0.05	0.41	0.13	0.07	2.18	0.11	0.00	96.79	
	Gon05302d	2.50	0.13	3.56	72.90	0.02	12.14	0.01	0.40	0.12	0.07	2.12	0.05	0.08	94.10	
	Gon05302f	2.72	0.03	3.68	73.10	0.02	12.08	0.07	0.39	0.12	0.02	2.02	0.15	0.03	94.43	
	Gon05302g	2.46	0.00	3.48	72.74	0.02	12.05	0.06	0.42	0.13	0.07	2.07	0.12	0.00	93.63	
	Gon05302h	2.64	0.08	3.61	71.71	0.02	12.18	0.01	0.39	0.12	0.06	2.17	0.16	0.07	93.20	
	Gon05302j	2.55	0.16	3.33	70.51	0.03	11.88	0.04	0.43	0.11	0.03	2.03	0.13	0.09	91.30	
	Gon05302l	3.43	0.10	4.00	72.94	0.01	12.49	0.04	0.43	0.11	0.07	2.03	0.14	0.06	95.86	
	Gon05302m	3.11	0.03	3.80	73.39	0.02	12.52	0.06	0.43	0.12	0.05	2.13	0.13	0.05	95.84	
	Gon05302o	2.60	0.26	3.67	71.01	0.02	12.09	0.07	0.40	0.15	0.07	2.12	0.13	0.09	92.68	
	Gon05302p	2.40	0.08	3.52	69.97	0.03	12.27	0.07	0.42	0.12	0.05	2.14	0.15	0.00	91.20	
	Gon05302q	3.09	0.23	3.70	63.54	0.02	9.83	0.00	0.34	0.11	0.05	1.53	0.08	0.00	82.55	low total
	<b>AVERAGE</b>	<b>2.74</b>	<b>0.09</b>	<b>3.64</b>	<b>72.79</b>	<b>0.02</b>	<b>12.22</b>	<b>0.04</b>	<b>0.41</b>	<b>0.12</b>	<b>0.06</b>	<b>2.10</b>	<b>0.12</b>	<b>0.04</b>	<b>94.40</b>	
	<b>σ</b>	<b>0.30</b>	<b>0.08</b>	<b>0.19</b>	<b>1.84</b>	<b>0.01</b>	<b>0.23</b>	<b>0.02</b>	<b>0.02</b>	<b>0.01</b>	<b>0.02</b>	<b>0.05</b>	<b>0.03</b>	<b>0.04</b>	<b>2.16</b>	
Gon05 302 feldspar n=4	Gon05302n	8.41	0.00	3.09	66.36	0.01	18.57	0.02	1.10	0.02	0.00	0.32	0.00	0.39	98.29	
	Gon05302k	8.38	0.00	3.60	68.65	0.01	20.28	0.00	0.62	0.00	0.02	0.33	0.00	0.37	102.25	
	Gon05302i	8.32	0.00	3.23	65.58	0.01	20.45	0.00	1.06	0.02	0.01	0.29	0.00	0.43	99.41	
	Gon05302e	8.72	0.00	2.77	67.35	0.01	21.79	0.00	1.46	0.02	0.00	0.34	0.00	0.45	102.89	
	<b>AVERAGE</b>	<b>8.46</b>	<b>0.00</b>	<b>3.17</b>	<b>66.99</b>	<b>0.01</b>	<b>20.27</b>	<b>0.01</b>	<b>1.06</b>	<b>0.02</b>	<b>0.01</b>	<b>0.32</b>	<b>0.00</b>	<b>0.41</b>	<b>100.71</b>	

DATA REPOSITORY ITEM #. INDIVIDUAL MICROPROBE ANALYSES, ADU-ASA FORMATION, GONA, ETHIOPIA

Sample number	Analysis number	Major element composition (weight percent)													Comments	
		Na <sub>2</sub> O	F	K <sub>2</sub> O	SiO <sub>2</sub>	MgO	Al <sub>2</sub> O <sub>3</sub>	ZrO <sub>2</sub>	CaO	Cl	MnO	FeO	TiO <sub>2</sub>	BaO		Total
	<b>σ</b>	<b>0.18</b>	<b>0.00</b>	<b>0.34</b>	<b>1.33</b>	<b>0.00</b>	<b>1.32</b>	<b>0.01</b>	<b>0.34</b>	<b>0.01</b>	<b>0.01</b>	<b>0.02</b>	<b>0.00</b>	<b>0.04</b>	<b>2.21</b>	

*Notes:* Analyses from the Adu-Asa Formation at Gona, with total Fe expressed as FeO. Samples were analyzed on a Cameca SX50 electron microprobe at the Lunar and Planetary Laboratory, University of Arizona using the set-up conditions listed in Table 1. Sample locations are shown in Figure 2. Summary calculations are detailed in Tables 4 (glass analyses) and 5 (feldspar analyses). Italicized analyses are excluded from these calculations.

\*Ash flow tuff or surge deposit