

**Gems & Gemology Data Depository Table 2:** Mn, Fe, and Ti abundances in pezzottaite and red and pink beryls<sup>a</sup>

<u>Reference</u>	<u>MnO</u>	<u>FeO</u>	<u>TiO<sub>2</sub></u>	<u>Locality</u>	<u>Notes</u>
<b><i>Pezzottaite</i></b>					
This study	0.02-0.19 (avg. 0.11)	bdl-0.02	bdl-0.04	Ambatovita, Madagascar	Range of 49 analyses of 11 purplish pink samples
Simmons et al. (2003)	0.09	bdl	bdl	Ambatovita, Madagascar	Average of 9 analyses of purplish pink core
	0.06	bdl	bdl	Ambatovita, Madagascar	Average of 8 analyses of light pinkish orange rim
Hänni and Krzemnicki (2003)	bdl	0.02	bdl	Ambatovita, Madagascar	1 sample; Fe as Fe <sub>2</sub> O <sub>3</sub>
<b><i>Pink Beryl</i></b>					
Duparc et al. (1910)	bdl	bdl	0.003	Tsilaisina, Madagascar	Rose crystal; analytical technique unknown
Sosedko (1957)	bdl	0.08	0.01	Russia	Fe as Fe <sub>2</sub> O <sub>3</sub>
Beus (1966)	0.10	0.20	nr	China	Fe as Fe <sub>2</sub> O <sub>3</sub> ; analytical technique unknown
	nr	0.35	nr	Europe	Fe as FeO + Fe <sub>2</sub> O <sub>3</sub> ; analytical technique unknown
	0.05	0.06	nr	China	Fe as Fe <sub>2</sub> O <sub>3</sub> ; analytical technique unknown
	0.04	trace	nr	Ural Mountains, Russia	Analytical technique unknown
	nr	0.08	0.01	Europe	Fe as Fe <sub>2</sub> O <sub>3</sub> ; analytical technique unknown
Staatz et al. (1965)	0.005	0.03	bdl	Millard-Chandler pegmatite, Rockingham Co., New Hampshire	Spectrographic analysis; reported as wt.% elements
Aurischio et al. (1988)	bdl	bdl	bdl	Mount Bity region, Madagascar	Pale pink crystal
	bdl	bdl	bdl	Mawi, Nuristan, Afghanistan	Pink crystal
	0.37	bdl	bdl	Elba, Tuscany, Italy	Pale pink crystal
	bdl	bdl	bdl	Pala, San Diego Co., California	Pale pink crystal
	bdl	bdl	bdl	Salinas mine, Minas Gerais, Brazil	Pale pink
Solntsev and Bukin (1997)	0.06	0.03	nr	Mozambique	Fe as Fe <sub>2</sub> O <sub>3</sub> ; analytical technique unknown
	0.06	0.09	nr	Mozambique	Fe as Fe <sub>2</sub> O <sub>3</sub> ; analytical technique unknown

Zagorsky et al. (1999)	0.016	0.15	<0.02	Mika, Rangkul pegmatite field, Russia	"Rose" color, Fe as Fe <sub>2</sub> O <sub>3</sub> ; analytical technique unknown
	bdl	0.10	0.03	Irkutyanka, Malkhan pegmatite field, Russia	Light "rose" color, Fe as Fe <sub>2</sub> O <sub>3</sub> ; analytical technique unknown
	0.02	0.17	0.01	Mohovaya, Malkhan pegmatite field, Russia	"Rose" color, Fe as Fe <sub>2</sub> O <sub>3</sub> ; analytical technique unknown
	0.03	0.12	bdl	Mohovaya, Malkhan pegmatite field, Russia	Light "rose" color, Fe as Fe <sub>2</sub> O <sub>3</sub> ; analytical technique unknown
	0.02	0.19	nr	Vodorazdelnaya, Menza pegmatite field, Russia	Light "rose" color, Fe as Fe <sub>2</sub> O <sub>3</sub> ; analytical technique unknown
	0.02	0.26	nr	Vodorazdelnaya, Menza pegmatite field, Russia	Light "rose" color, Fe as Fe <sub>2</sub> O <sub>3</sub> ; analytical technique unknown
	0.03	0.12	bdl	Maharitra, Madagascar	Light "rose" color, Fe as Fe <sub>2</sub> O <sub>3</sub> ; analytical technique unknown
	0.021	0.36	0.03	Gudjar Mali-2 pegmatite, Azad Kashmir, Pakistan	Light "rose" color, Fe as Fe <sub>2</sub> O <sub>3</sub> ; analytical technique unknown
Krambrock et al. (2002)	0.03	0.02	bdl	Araçuaí, Minas Gerais, Brazil	Pink
	0.02	0.04	bdl	Araçuaí, Minas Gerais, Brazil	Pink
Cerny et al. (2003)	0.03	bdl	nr	Bikita, Zimbabwe	Pale pink, platy crystal from vug
	0.06	0.08	nr	Bikita, Zimbabwe	Pink, from massive pegmatite
Hänni and Krzemnicki (2003)	bdl	0.02	bdl	Madagascar	Fe as Fe <sub>2</sub> O <sub>3</sub>
	0.02	0.02	bdl	Deva mine, Paroon Valley, Nuristan, Afghanistan	Fe as Fe <sub>2</sub> O <sub>3</sub>

<i>Red Beryl</i>					
Staatz and Carr (1964)	0.20	1.60	0.20	Thomas Range, Utah	Spectrographic analysis; reported as wt.% elements
Nassau and Wood (1968)	0.08	0.70	0.09	Topaz Mountain, Thomas Range, Utah	X-ray fluorescence analysis Average of 17 analyses Average of 17 analyses
Meyer (1982)	2.06	0.47	0.16	Wah Wah Mountains, Utah	
Flamini et al. (1983)	0.18	1.46	0.28	Wah Wah Mountains, Utah	
	0.36	1.52	0.34	Wildhorse Springs, Thomas Range, Utah	
Shigley and Foord (1984)	0.30	1.80	0.40	Ruby Violet mine, Wah Wah Mts., Utah	Purplish red crystal rim
	0.10	1.50	0.00	Ruby Violet mine, Wah Wah Mts., Utah	Orangy red crystal core
Auricchio et al. (1988)	0.64	2.25	0.55	Ruby Violet mine, Wah Wah Mts., Utah	Pink rim of crystal
Auricchio et al. (1990)	0.68	2.56	0.22	Utah	Core of crystal
	0.73	2.63	0.25	Utah	Rim of crystal
	0.45	0.85	0.47	Utah	Core of crystal
	0.27	1.96	0.52	Utah	Rim of crystal
	0.44	1.86	0.48	Utah	Core of crystal
	0.33	1.36	0.40	Utah	Rim of crystal

Harding (1995)	0.82	2.81	0.29	Utah	Mean of 3 analyses
Foord (1996)	0.40	1.80	0.40	Ruby Violet mine, Wah Wah Mts., Utah	Red-violet crystal rim
	<0.1	<1.5	<0.04	Ruby Violet mine, Wah Wah Mts., Utah	Near colorless crystal core
	0.80	4.10	0.70	Ruby Violet mine, Wah Wah Mts., Utah	LA-ICP-MS analysis of 2 spots
	0.20	1.50	0.15	Ruby Violet mine, Wah Wah Mts., Utah	Weight percent elements; emission spectrographic analysis
Hänni and Krzemnicki (2003)	0.29	2.10	0.27	Utah	1 sample; Fe as Fe <sub>2</sub> O <sub>3</sub>

<sup>a</sup> Data represent electron microprobe analyses (wt.% oxide) unless stated otherwise; bdl = below the detection limit of the instrument and nr = not reported.

**Additional references for depository Table 2**

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