

**Gems & Gemology Data Depository: Samples used for gemological characterization in the Be-diffused corundum study.**

Category	Color before	Color after	Shape	Weight (ct)	Geographic origin	No. samples
<u>AGTA Samples</u>						
<i>Be diffused</i>	Unknown	Yellow	oval	1.06-1.17	Unknown	4
	Unknown	Orange/pink	28 round, 20 square, 10	0.20-3.00	Madagascar	73
	Unknown	Yellow	round	0.30-0.42	Songea, Tanzania	8
<i>Before/after</i>	Light yellow	Deep yellow/orangy yellow	calf's-head	3.08-6.38	Sri Lanka	6
	Pink	Orange/pink orange, vic	4 oval, 1 octagonal, 1 r	0.85-3.25	Unknown	6
	Pink	Purplish pink to orange	rough	0.8-3.6	Que Chau, Vietnam	6
	Blue	Yellow to greenish blue	rough	0.75-2.40	Kanchanaburi, Thailand	6
	Blue	Blue to dark blue	rough	1.2-2.0	Laos	6
	Blue	Blue	rough	1.00-2.17	Lam Dong, Vietnam	4
	Blue	Blue	1 pear, 1 round, 1 ova	0.33-0.75	Lam Dong, Vietnam (heate	4
	Blue	Blue	rough	0.08-0.30	Lava Plains, Australia	6
	Gray	Yellow	rough	6.34-4.84	Umba	2
	Light yellow	Medium yellow	rough	2.96-5.06	Umba	2
	Blue	Blue	rough	3.32-3.96	Umba	2
<i>Non-diffused</i>	Greenish blue	---	rough	28	Umba	1
	Pink	---	9 octagonal halves, 3	0.38-0.69	Madagascar	12
	Blue	---	27 octagonal, 3 cushion	1.43-6.48	Sri Lanka	33
	Pink to purple	---	17 oval, 3 octagonal, 10	0.85-4.75	Sri Lanka	22
	Green	---	Oval	0.41-0.66	Unknown	20
	Yellow	---	35 oval, 15 calf's-head	0.59-7.23	Sri Lanka	63
<u>GIA Carlsbad Samples</u>						
<i>Be diffused</i>	Unknown	Orange	oval, pear, briolette	0.34-2.01	Unknown	12
	Unknown	Orange	oval	0.55-0.95	Montana, U.S.	2
	Unknown	Orange	rough	1.28-8.53	Umba, Tanzania	6
	Unknown	Yellow	oval, briolette	0.27-2.25	Unknown	15
	Unknown	Yellow	round, oval	0.19-1.14	Montana, U.S.	11
	Unknown	Yellow	rough	0.76-4.67	Umba, Tanzania	15

	Unknown	Orange/pink	oval, pear, briolette	0.67-1.89	Ilakaka, Madagascar	74
	Unknown	Orange/pink	rough	1.90-4.79	Umba, Tanzania	7
	Unknown	Red	round, oval	0.26-7.50	Unknown	17
	Unknown	Red	rough	1.07-1.78	Umba, Tanzania	6
	Unknown	Blue	briolette	0.60	Unknown	1
	Unknown	Purple	briolette	1.02	Unknown	1
	Unknown	Purple	rough	1.01-3.13	Umba, Tanzania	2
	Unknown	Green	briolette	1.28-3.28	Unknown	3
<i>Before/after</i>	Pink	Orange/pink	oval (sawn in half)	0.40-0.60	Ilakaka, Madagascar	7
	Pink	Orange/pink	rough	0.06-0.60	Ilakaka, Madagascar	23
	Purple/brownish red	Orangy red	rough	0.12-0.48	Songea, Tanzania	32
	Green	Yellow	rough	0.11-0.69	Songea, Tanzania	37
	Green	Yellow with blue center:	rough	1.09-3.02	Thailand	4
<i>Non-diffused</i>	Green/blue/yellow range	---	round	0.16-0.76	Songea, Tanzania	131
	Purple/pink/red range	---	round	0.15-1.25	Songea, Tanzania	119
	Pink	---	rough	0.34-1.60	Ilakaka, Madagascar	21
	Mixed pale colors	---	briolette	0.99-1.08	Unknown	11

#### GIA New York Samples

##### *Be-diffused*

39402	Unknown	Orange	Half oval	na	Unknown	1
39403	Unknown	Orange	Half oval	na	Unknown	1
39404	Unknown	Orange	Half oval	na	Unknown	1
45032	Unknown	Orange	Briolette	1.18	Unknown	1
45033	Unknown	Orangy red	Briolette	1.54	Unknown	1
45035	Unknown	Yellow	Oval	1.11	Unknown	1
45082	Unknown	Pink	Oval	0.77	Unknown	1
45490	Unknown	Yellow with blue large s	Rough		Unknown	1
45491	Unknown	Yellow	Half oval	0.64	Unknown	1
45492	Unknown	Orange	Half oval	0.93	Unknown	1
48413	Unknown	Orange	Square	0.48	Unknown	1
48415	Unknown	Red	Oval	0.63	Unknown	1
48430	Unknown	Orange	Oval	2.39	Unknown	1
48717	Unknown	Orange	Rectangle	0.86	Unknown	1
48849	Unknown	Orange yellow	Oval	2.44	Unknown	1

48851	Unknown	Yellow	Oval	1.54	Unknown	1
48853	Unknown	Pinkish orange	Oval	0.90	Unknown	1
48878	Unknown	Red	Oval	2.78	Unknown	1
48882	Unknown	Orange	Oval	13.19	Unknown	1
49415	Unknown	Red	Heart	3.21	Unknown	1
55162	Unknown	Yellow	Square	na	Unknown	1
55292	Unknown	Pinkish orange	Oval	1.22	Unknown	1
55293	Unknown	Pinkish orange	Oval	1.43	Unknown	1
55294	Unknown	Pinkish orange	Oval	1.35	Unknown	1
55295	Unknown	Pinkish orange	Oval	1.03	Unknown	1
55296	Unknown	Pinkish orange	Oval	1.14	Unknown	1
55297	Unknown	Pinkish orange	Oval	1.39	Unknown	1
55298	Unknown	Pinkish orange	Oval	1.19	Unknown	1
55299	Unknown	Pinkish orange	Oval	1.18	Unknown	1
55300	Unknown	Pinkish orange	Oval	0.96	Unknown	1
55301	Unknown	Pinkish orange	Oval	0.58	Unknown	1
55302	Unknown	Orangy pink	Oval	0.56	Unknown	1
55303	Unknown	Pinkish orange	Oval	0.51	Unknown	1

*Before/After*

49053	Colorless	Yellow	Rough, double-side	2.77	Unknown	1
49074	Light yellow, close to colorless	Orange	Rough, double-side	5.08	Sri Lanka	1
49076	Colorless	Orange	Rough, double-side	7.10	Sri Lanka	1
49081-1	Green	Orange	Rough, double-side	5.56	Montana, U.S.	1
49081-2	Light yellow	Blue	Rough, double-side	5.56	Montana, U.S.	1
49086	Intense green	Deep brown	Rough, double-side	3.30	Unknown	1
49089-1	Light yellow	Intense yellow	Rough, double-side	2.09	Unknown	1
49089-2	Blue	Deep blue	Rough, double-side	2.09	Unknown	1
49093-1	Blue	Purple	Rough, double-side	1.78	Unknown	1
49093-2	Purple	Blue	Rough, double-side	1.78	Unknown	1
49094	light pink	Light pinkish orange	Rough, double-side	2.06	Unknown	1
49102	Pink	Pink	Oval	0.83	Vietnam	1
49103	Intense yellowish brown	Intense orange	Rough, double-side	0.77	Songea, Tanzania	1
49104	Intense orange brown	Intense orange	Rough, double-side	0.66	Songea, Tanzania	1
49105	Intense gray-green	Intense orange	Rough, double-side	0.68	Songea, Tanzania	1
49106	Yellowish brown	Intense orange	Rough, double-side	0.66	Songea, Tanzania	1
49109	Intense brown purple	Intense orange	Rough, double-side	0.85	Songea, Tanzania	1

49110	Gray-violet	Intense orange	Rough, double-side	0.64	Songea, Tanzania	1
49111	Grayish violet	Intense orange	Rough, double-side	0.50	Songea, Tanzania	1
49112	Intense orange brown	Intense orangy red	Rough, double-side	0.77	Songea, Tanzania	1
49113	Brown	Red	Rough, double-side	0.64	Songea, Tanzania	1
49114	Intense yellow	Intense orangy yellow	Oval	0.58	Unknown	1
49314	Blue	Deep blue	Rough, double-side	1.15	N. Madagascar	1
49315	Light blue	Deep blue	Rough, double-side	1.99	N. Madagascar	1
45002	---	Pinkish orange	Half emerald	0.87	Unknown	1
45031	Pink	---	Half emerald	0.86	Unknown	1
45493	---	Pinkish orange	Half emerald	0.20	Unknown	1
45494	Pink	---	Half emerald	0.24	Unknown	1

*Non-diffused*

45034	Blue	---	Briolette	1.87	Unknown	1
48414	Pink	---	Marquise	0.83	Unknown	1
48718	Red	---	Oval	0.97	Mong Hsu, Myannar	1
48879	Blue	---	Round	0.71	Unknown	1
48880	Blue	---	Round	0.61	Unknown	1
48881	Blue	---	Round	0.51	Unknown	1
49045	Light pink	---	Rough	1.56	Unknown	1
49046	Light pink	---	Rough	2.56	Unknown	1
49047	Light yellowish pink	---	Rough	1.19	Unknown	1
49048	Light pink	---	Rough	1.62	Unknown	1
49049	Pink	---	Rough	1.29	Unknown	1
49050	Pink	---	Rough	1.68	Unknown	1
49051	Purple	---	Rough	1.73	Unknown	1
49052	Purple	---	Rough	1.02	Unknown	1
49053	Colorless	---	Rough	2.77	Unknown	1
49054	Colorless	---	Rough	1.96	Unknown	1
49055	Light yellow	---	Rough	1.37	Unknown	1
49056	Yellow	---	Rough	2.88	Unknown	1
49057	Blue	---	Half round	0.51	Unknown	1
49058	Yellow	---	Half round	0.54	Unknown	1
49059	Grayish pink	---	Half round	0.52	Unknown	1
49060	Grayish pink	---	Half round	0.35	Unknown	1
49061	Grayish pink	---	Half round	0.50	Unknown	1
49062	Grayish pink	---	Half round	0.44	Unknown	1
49063	Pink	---	Half round	0.41	Unknown	1

49064	Purple	---	Half round	0.48	Unknown	1
49074	Light yellow	---	Rough	5.08	Sri Lanka	1
49075	Light yellow	---	Rough	5.68	Sri Lanka	1
49077	Light yellow	---	Rough	8.32	Sri Lanka	1
49078	Light yellow	---	Rough	12.36	Sri Lanka	1
49081	Brown	---	Rough	5.56	Montana, U.S.	1
49082	Green-blue	---	Rough	3.33	Montana, U.S.	1
49083	Green-blue	---	Rough	2.56	Montana, U.S.	1
49084	Blue	---	Rough	1.16	Montana, U.S.	1
49085	Yellow	---	Rough	1.11	Montana, U.S.	1
49086	Dark green	---	Rough	3.30	Unknown	1
49087	Light green	---	Rough	1.87	Unknown	1
49088	Light green	---	Rough	1.67	Unknown	1
49089	Dark blue	---	Rough	2.09	Unknown	1
49090	Dark blue	---	Rough	2.51	Unknown	1
49091	Light yellow	---	Rough	2.07	Unknown	1
49092	Light yellow	---	Rough	1.77	Unknown	1
49093	Purple	---	Rough	1.78	Unknown	1
49094	Light pink	---	Rough	2.06	Unknown	1
49095	Light gray	---	Rough	1.34	Unknown	1
49101	Deep brown	---	Oval	0.70	Unknown	1
49102	Deep pink	---	Oval	0.83	Vietnam	1
49103	Light brown	---	Round	0.77	Songea, Tanzania	1
49104	Light brown	---	Round	0.66	Songea, Tanzania	1
49105	Gray	---	Round	0.68	Songea, Tanzania	1
49106	Light brown	---	Round	0.66	Songea, Tanzania	1
49108	Light brown	---	Round	0.42	Songea, Tanzania	1
49109	Brown-purple	---	Round	0.85	Songea, Tanzania	1
49110	Blue-purple	---	Round	0.64	Songea, Tanzania	1
49111	Blue-purple	---	Round	0.50	Songea, Tanzania	1
49112	Brownish Orange	---	Round	0.77	Songea, Tanzania	1
49113	Red	---	Round	0.64	Songea, Tanzania	1
49114	Yellow	---	Oval	0.58	Unknown	1
49183	Blue	---	Oval	1.13	Unknown	1
49184	Blue	---	Oval	0.32	Unknown	1
49202	Yellow	---	Oval	0.53	Unknown	1
49203	Yellow	---	Oval	0.50	Unknown	1
49204	Green	---	Oval	0.81	Unknown	1

49205	Blue	---	Marquise	1.34	Unknown	1
49206	Blue	---	Oval	0.84	Unknown	1
49207	Green	---	Oval	0.68	Vietnam	1
49208	Blue	---	Oval	0.44	Vietnam	1
49209	Yellow	---	Oval	1.18	Unknown	1
49210	Yellow	---	Oval	0.76	Unknown	1
49211	Yellow	---	Oval	0.69	Unknown	1
49212	Yellow	---	Oval	0.68	Unknown	1
49213	Blue	---	Square	1.45	Unknown	1
49214	Blue	---	Oval	1.06	Unknown	1
49215	Blue	---	Marquise	0.71	Unknown	1
49216	Blue	---	Oval	1.12	Unknown	1
49217	Gray-blue	---	Oval	1.04	Unknown	1
49218	Blue	---	Oval	0.86	Unknown	1
49219	Green	---	Oval	0.84	Unknown	1
49220	Pink	---	Oval	0.30	Thailand	1
49221	Pink	---	Marquise	0.37	Thailand	1
49222	Pink	---	Marquise	0.27	Thailand	1
49223	Pink	---	Marquise	0.26	Thailand	1
49224	Pink	---	Marquise	0.23	Thailand	1
49233	Green	---	Oval	1.42	Australia?	1
49234	Green	---	Oval	0.78	Australia?	1
49235	Green	---	Oval	0.67	Australia?	1
49236	Blue	---	Marquise	1.45	Australia?	1
49237	Blue	---	Marquise	1.54	Australia?	1
49238	Blue	---	Emerald	0.78	Australia?	1
49314	Deep blue	---	Rough	1.15	N. Madagascar	1
49315	Light greenish blue	---	Rough	1.99	N. Madagascar	1
49420	Blue	---	Rough	0.54	Unknown	1
49421	Light green	---	Rough	1.17	Unknown	1
49706	Light yellow	---	Rough	7.10	Sri Lanka	1
49715	Deep blue	---	Rough	18.44	Nigeria (heated)	1
49716	Light yellow	---	Oval	0.88	Unknown	1
49717	Deep gray	---	Oval	0.69	Unknown	1
49719	Orangy yellow	---	Oval	0.32	Unknown	1
49721	Deep orangy yellow	---	Round	0.21	Unknown	1
49722	Pink	---	Oval	1.57	Vietnam	1
49726	Pink	---	Oval	0.88	Vietnam	1

49727	Red	---	Oval	0.83	Vietnam	1
49728	Blue	---	Round	0.71	Songea	1
49729	Blue	---	Round	0.44	Songea	1
49730	Red	---	Round	0.84	Songea	1
49731	Red	---	Round	0.65	Songea	1
49732	Red	---	Round	0.60	Songea	1
49733	Red	---	Round	0.60	Songea	1
49734	Yellow	---	Oval	0.56	Unknown	1
49735	Yellow	---	Oval	0.56	Unknown	1
49741	Blue	---	Rough	1.76	N. Madagascar	1
49742	Blue	---	Rough	1.27	N. Madagascar	1
49743	Blue	---	Rough	0.56	N. Madagascar	1
49744	Blue	---	Rough	0.83	N. Madagascar	1
49745	Green	---	Rough	1.70	N. Madagascar	1
49746	Blue	---	Rough	0.60	N. Madagascar	1
49747	Green	---	Rough	1.14	N. Madagascar	1
55016	Blue	---	Oval	2.57	Unknown	1
55766	Red	---	Oval	5.27	Unknown	1