

TOURMALINE

Tourmalines have a wide variety of exciting colors with one of the widest color ranges of any gem.



ABOUT TOURMALINE



Tourmaline's colors have many different causes. It's generally agreed that traces of iron, and possibly titanium, induce green and blue colors.

Manganese produces reds and pinks, and possibly yellows. Some pink and yellow tourmalines might owe their hues to color centers caused by radiation, which can be natural or laboratory-induced.

BIRTHSTONES & ANNIVERSARIES

Tourmaline is a birthstone for October, along with opal.

Tourmaline is also the gem of the eighth anniversary.

TREATMENTS

There are a number of processes used to alter the color, apparent clarity, or improve the durability of gems.

SYNTHETICS

Some gemstones have synthetic counterparts that have essentially the same chemical, physical, and optical properties, but are grown by man in a laboratory.

IMITATIONS

Any gem can be imitated—sometimes by manmade materials or by natural materials chosen by man to impersonate a particular gem.



WHY WE LOVE THIS GEMSTONE

TRIGONAL SYSTEM

Tourmaline crystallizes in the trigonal system; no other common mineral has three-sided prisms.

WATERMELON VARIETY

Watermelon tourmaline is green on the outside and a delicious pink on the inside.

LIDDICOATITE

Liddicoatite tourmaline was named for beloved former GIA President Richard T. Liddicoat.

1554

Francisco Spinoza's expedition discovers "Brazilian emerald": the first recorded green tourmaline

PYROELECTRIC

Tourmaline becomes electrically charged when heated. Also when squeezed: it's piezoelectric too.

PARAIBA

Brazilian source famous for vivid blue to green tourmalines colored by copper.

FACTS

MINERAL: Topaz

CHEMISTRY:

Elbaite $\text{Na}(\text{Li}_{1.5}, \text{Al}_{1.5})\text{Al}_6\text{Si}_6\text{O}_{18}(\text{BO}_3)_3(\text{OH})_4$

Dravite $\text{NaMg}_3\text{Al}_6\text{Si}_6\text{O}_{18}(\text{BO}_3)_3(\text{OH})_4$

Liddicoatite $\text{Ca}(\text{Li}_2\text{Al})\text{Al}_6\text{Si}_6\text{O}_{18}(\text{BO}_3)_3(\text{OH})_3\text{F}$

Chromedravite $\text{NaMg}_3\text{Cr}_6\text{Si}_6\text{O}_{18}(\text{BO}_3)_3(\text{OH})_4$

Color: All colors

REFRACTIVE INDEX: 1.624 to 1.644

SPECIFIC GRAVITY: 3.06 (+0.20, -0.06)

MOHS HARDNESS: 7 to 7.5

BIREFRINGENCE: 0.018 to 0.040