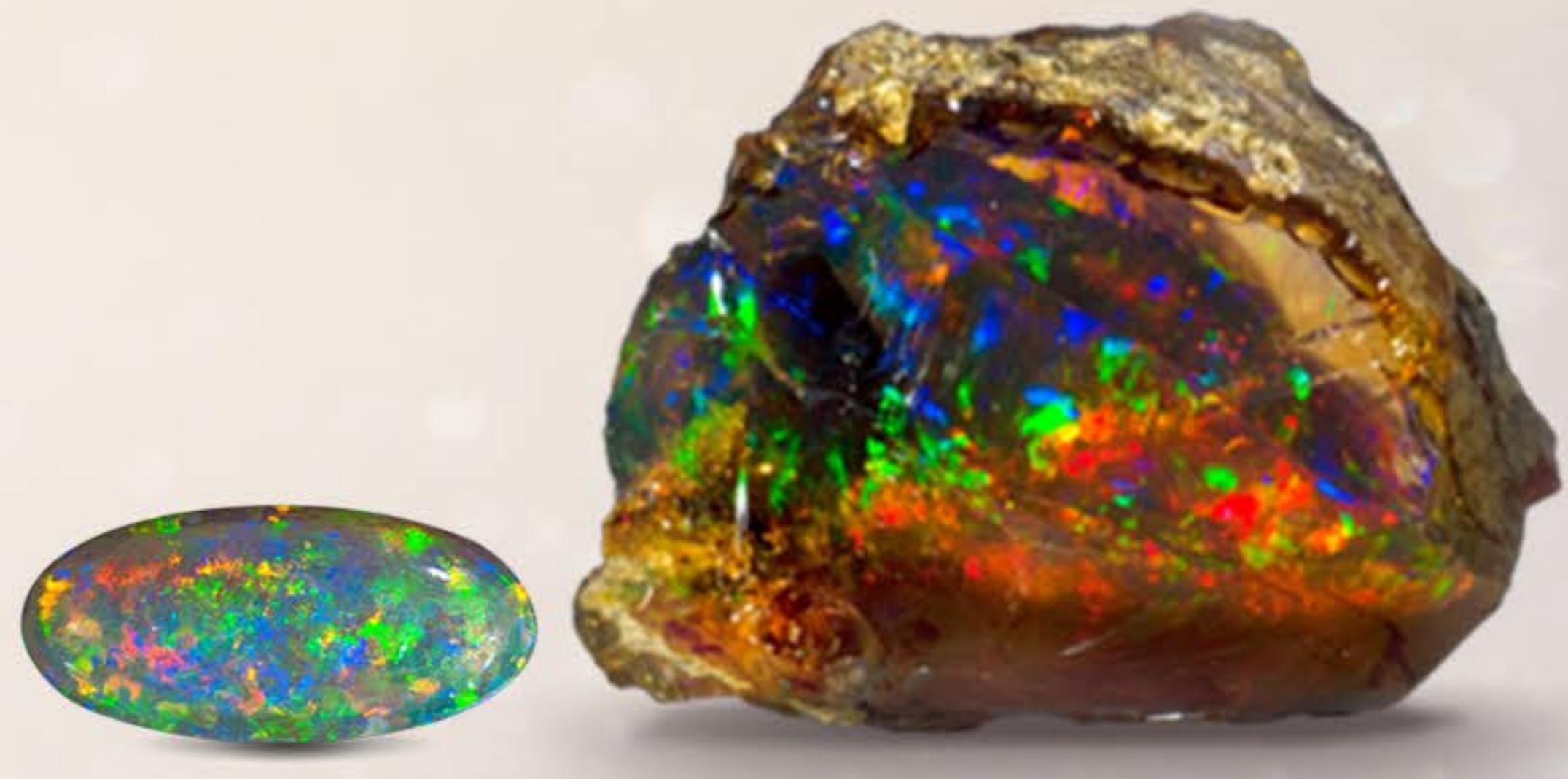


OPAL

Fireworks. Jellyfish. Galaxies. Lightning. Opal's shifting play of kaleidoscopic colors is unlike any other gem.



ABOUT OPAL



Because opal has the colors of other gems, the Romans thought it was the most precious and powerful of all. The Bedouins believed that opals contained lightning and fell from the sky during thunderstorms.

When Australia's mines began to produce opals commercially in the 1890s, it quickly became the world's primary source for this October birthstone.

BIRTHSTONES & ANNIVERSARIES

Opal is an October birthstone.

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.

0.2 MICRONS

Grids of silica spheres 0.2 microns in size create red play-of-color flashes.

20% WATER

Opal contains up to 20% water trapped in its silica structure.

1829

The novel "Anne of Geierstein" gave opal a reputation of being unlucky.

FACTS

MINERAL: Hydrated Silica

CHEMISTRY: $\text{SiO}_2 \cdot n\text{H}_2\text{O}$

COLOR: All colors

REFRACTIVE INDEX: 1.37-1.47

SPECIFIC GRAVITY: 2.15 (+0.08, -0.90)

Mohs Hardness: 5 to 6.5

BIREFRINGENCE: None



WHY WE LOVE THIS GEMSTONE

FORMATION

When opal formed, silica gel filled crevices in rock. As water evaporates, the silica is deposited in the form of tiny spheres.

INTERACTION WITH LIGHT

Opal's flashing play-of-color is caused by diffraction of light by silica spheres stacked like tiny Ping-Pong balls in a box.

UNIQUE

Opal's arrays of silica spheres form a fantastic variety of patterns and colors. No two opals are exactly alike.