

CLMG-7300

Operation Manual

The Chelsea Filter (CLMG-7300) is a helpful tool in distinguishing a few red and certain blue & green gemstones, even identifying them from paste (brilliant lead glass) or synthetic gems since gemstones will appear to change colour when viewed with this. It works by allowing only certain wavelengths of yellow-green and red colors (around both 690 nanometer [nm] and 570 nm) to be transmitted through the filter.

This Chelsea color filter has a glass filter thus gives better clarity, reduces distortion and provides better protection from humidity. Best results are obtained when stones are examined under a strong white light source.

Chelsea Filter can filter out mixed-in jewelry and differentiate emerald from emerald look-alikes. It is also useful for checking aquamarine and sapphires. When used with other gemological tools - such as a dichroscope, spectroscope, jewelers loupe or more - gem identification can be more accurately determined.



Features:

- Accurately distinguish the real nature of the gems in an instant
- Detects the presence of Chromium and Cobalt (normally indicates the coloring elements present in certain gems)
- Generally useful for green and blue stones
- In some cases it may help to detect dye in certain stones.
- Supplied with leather pouch case
- Approved by strict quality and safety standards for long and trouble-free life
- Guaranteed high quality and accurate testing results
- Brand new and unused

Specifications:

- Filter Diameter: 20mm

- Body : Made of metal

Operating procedure:

- Hold the filter close to your eye as you would a loupe. Holding the Chelsea filter down close to the gemstone does not work and masks off your reaction. You can even view multiple gems this way. Even items in showcases can be examined if they are strongly lit.

- The stone/s must be amply and directly lit with a strong white light such as bright sunlight, strong light bulb, torch, high-intensity lamp etc. for better color reaction.

- When viewing the gem, inspect the gem for change in color and also note the intensity of the color.

Precautions:

- Stones should be observed from all directions.
- The reaction seen through the stone will depend on size, shape, transparency, cut and colour of the stone. Each stone will react differently depending on the coloring agents present.
- The Chelsea Filter on it's own is only an indicative tester. The test in itself does not fully confirm the stone's identity unless used in conjunction with other gemological tools. The presence of iron tends to retard or "inhibit" the red colour in gemstones and is responsible for the shade variations
- A synthetic emerald with iron content will tend to behave as some natural emeralds, while a natural emerald with high chromium content will exhibit red like some synthetic emeralds.
- Stones should never be left more than a minute or so under hot light sources as some may be damaged by the heat of the focused beam from a high-intensity lamp etc.

Care Instructions:

- Do not touch the filter (use a soft dry cloth to remove dust)
- Do not allow to become hot, e.g. on a radiator or in direct sunlight
- Do not immerse in liquid
- Keep it folded / closed when not in use

Chelsea Filter Chart:

Source: http://www.gemologyonline.com/chelsea_filter.html

Type of Stone or Gemstone	Colour Shown through Filter or Apparent Color
GREEN STONES:	
Alexandrite	Red
Aquamarine	Distinctly Green
Aventurine Quartz	Reddish
Chrome Chalcedony	Red
Chrysoprase	Green
Demantoid Garnet	Reddish
Emerald (some Emeralds from South Africa and India may not show a Red hue, but remain Greenish)	Pink to Red
Enstatite	Green
Fluorite	Reddish
Glass (pastes)	Green
Hiddenite	Slight Pink
Jadeite	Green
Peridot	Green: Aqua Blue
Sapphire	Green
Soude' emerald (the old type soude emerald may show Red)	Green
Stained Bowenite	Red
Stained Chalcedony	Red
Stained Jadeite	Red
Synthetic Corundum (Alexandrite color)	Red
Synthetic Emerald (most)	Strong Red
Synthetic Sapphire	Red
Synthetic Spinel (some old types may show Green)	Red
Tourmaline (Certain anomalous green tourmalines have been found to show Red - which would indicate chrome tourmaline)	Green
Tsavorite garnet	Red
Uvarovite garnet	Pink
Zircon	Reddish
RED STONES:	
Garnets Dark Red (no fluorescence)	Red
Garnet-topped doublets (no fluorescence)	Dark Red
Glass (paste) (no fluorescence)	Dark Red
Ruby (natural and synthetic) Strong fluorescence	Red
Spinel Fluorescent	Red
Spinel (synthetic) Fluorescent (The pink synthetic spinel does not show a red color through the filter)	Red

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Type of Stone or Gemstone	Colour Shown through Filter or Apparent Color
BLUE STONES:	
Aquamarine	Distinctive Green
Garnet-topped doublets	Greenish-Blue
Glass (pastes) Dark Blue	Red
Glass (pastes) Light Blue	Greenish
Lapis Lazuli	Weak Brownish Red
Sapphire Blackish (The Blue sapphire which shows a Purple color under artificial light, usually shows Red under the filter)	Green
Sodalite	Slightly Brownish
Spinel	Reddish
Spinel (natural) colored by cobalt	Red
"Swiss lapis" Greenish-Blue	Greenish-Blue
Synthetic Sapphire (The natural and synthetic sapphire are indistinguishable under the color filter)	Dark Greenish-Blue
Synthetic Spinel Dark Blue	Red
Synthetic Spinel Light Blue	Orange
Synthetic Spinel "Zircon" color	Orange to Red
Synthetic Spinel "Lapis lazuli" color	Bright Red
Zircon	Greenish
PURPLE STONES:	
Amethyst	Reddish
Violet Sapphire	Bright Red