

# Ask The Oracle

## Question 1 - to be answered in the next issue

What is the mechanism that causes a 'crystal' clear piece of green tourmaline to appear black and opaque when viewed down the 'C' axis of the crystal?

## Question 2 - to be answered in the next issue

What is meant by the term 'colour intensity' and what causes it, for example, in a piece of good quality ruby, and good quality emerald?



**Q:** I am new to faceting and would like to know more about Spirit lamps, heat sources and Dops: what they are -•what sizes -what shapes - where to buy -•how to avoid breaking stones.

### Answer by Steve Smith

The two main forms of heating wax and dops are Methylated Spirit lamps and small gas torches. The lamp gives a cooler flame and is more manageable for new cutters as it does not overheat the wax, which would make it brittle. The torch is more manoeuvrable but has a fierce heat that can damage stones and singe fingers if handled inappropriately.

Dinky Doppler (light bulb in a tin can) is used to gently pre-warm non heat sensitive stones prior to dopping. I coat the surface of the stone to be dopped with liquid shellac to help bond the wax more easily.

Dops are always a personal decision and depends on what you want to cut. For a new faceter I would recommend the following : Flat dops 1 each of 6 and 10mm, "V" dops 4, 6 and 8mm, Cone dops two each of 3, 5, 8 and 10mm. Other shaped dops can be added at a later date. I use a double cone dop system instead of a cone and a flat because I find that It gives a stronger bond to the stone and is easier to refit if the stone is accidentally knocked off.

You can purchase dops from various USA manufacturers (accurately measure your dops mm/inches) remembering that postage and import

duty will be charged. There is a machinist near where I live in Newcastle upon Tyne who has been making dops for a number of machines in my workshop and for members of the NE1 Faceters. They have been superbly finished and can be keyed for different machines if required.

To the point of breakage, the normal answer would be "take care", do not drop your stone, hit the central lap nut, the side of the pan, or leave it under the light when it is switched on whilst you do something else (oops),do not over heat heat sensitive stones. Look for fractures/inclusions that may open up whilst cutting, but lately I have heard and found that stones are breaking due to becoming brittle after heating to change the stones colour.

Contact some of your other members and ask for help, information etc. Go and visit (call and arrange it first) to see what they have in the way of dops and what techniques they use. Faceting does not have to be a solitary activity as it is fun to cut with a friend or group, as the dynamics and support always gives everyone a boost and improves cutting techniques.

For further information look at past Stonechat magazines, John Baily's• and the USFG websites or contact me at [gemtutor@btinternet.com](mailto:gemtutor@btinternet.com)