TREATING PROCESS

IMPORTANT

The most important governing factor in treating is NEVER let the temperature change suddenly – IT MUST BE GRADUAL – otherwise you'll find you have a jar full of cracked and broken pieces of matrix. and even worse you end up cracking the jars where everything is left in the bottom of the oven.

It pays to use IXL preserving jars than just an old ordinary glass jar. The reason being that most preserving jars are made to take heat and the likelihood of them cracking is very small in comparison to ordinary glass jars.

No.1 – DESALINATION PERIOD

As mentioned, matrix contains a certain amount of salt and to allow good penetration in the treating process, the salt must be removed as much as possible. Place the matrix in clean water and allow it to soak for at least two days, changing the water each day. It is hard to determine the percentage of salt in the matrix, but it pays to try and dilute it as much as possible.

I usually put the opal matrix in a bucket of water and let it stand for a week in the summer period and in that time some of the water will have evaporated leaving a salt ring above the level of water. If there is no sign of salt, it can be said that it's ready to treat.

I found the best method was to place the opal matrix in a saucepan and heat it slowly on the stove, once it had cooled down you usually see a distinctive ring of salt around the container. Then it's just a matter of changing the water regularly, then heat it again and make sure there's no ring of salt.

You can usually judge by the amount of salt in the container as to how many times you may have to repeat this process to get rid of all the salt.

No.2 – DEHYDRATION PERIOD

Assuming that the cabochons and slabs are being treated together, select two glass containers, both of the same size, but be sure that when the matrix is placed in one of the containers that it only fills one quarter of that container. With the other container or jar, fill it with a sugar solution, 1 cup of sugar to 3 cups of water (rainwater if possible).

You may find it better to use honey, lactose or glucose; all it does is make a stronger solution – the weaker the solution the more penetration you will get on porous stones, when you apply the heat.

Place the container in the oven and set the temperature at 150 – 200 degrees F and maintain this temperature for a period of at least four hours. That will, as the heading

indicates, dehydrate the matrix in the jar and allow easy penetration of the sugar solution in the next stage in the other jar. Allow things to cool down over night.

No. 3 – SUGAR PROCESS

Turn the oven on which has been switched off, make sure it's about ROOM TEMPERATURE. I usually allow the oven to cool down over night so that there is no possibility of cracking the opal matrix. By using the normal household oven it is possible to open the oven door and pour the sugar solution into the jar that contains the matrix. Place a glass plate over the mouth of the jar, which contains the matrix and sugar, as this tends to slow down the evaporation of the solution. Remove the jar, which contained the sugar solution, as this has no further use at this stage, but will be used in the acid treatment.

Reset the oven to 150- 200 degrees F but NEVER above 212 degrees F as you will evaporate your sugar solution in almost no time at all. As it remains under heat there is always a certain amount of evaporation and because of that the sugar solution gradually becomes thicker. Never let it get to the stage where it becomes so thick that when it cools down it sets hard like toffee. Maintain this temperature for at least two days. You will probably understand now why there is so much solution compared to matrix as times goes by the solution evaporates but should never go below the level of the matrix. If it does, you are operating on the wrong temperatures.

No. 4 – ACID PROCESS

Once it has reached the required time allowed for the sugar process, turn the oven off and allow to cool down to ROOM TEMPERATURE once again – this can take several hours. So if you become impatient and decide to open the oven sooner, the possibility of cracking the matrix is very high; therefore I suggest you don't open the oven too soon, leave it over night to cool down.

Now that the required balanced temperature has been reached, remove the jar from the oven, take off the glass plate and tip them into a dish. The sugar solution should run freely from the jar. If it doesn't, either the sugar ratio is incorrect or the temperature too high.

Wipe the excess sugar from the matrix, then place them in the jar which was removed from the sugar process which has now been cleaned and fill it ¾ full with sulphuric acid, 90% proof, or battery acid will do the job. IF YOU DON'T thoroughly wipe the pieces of opal matrix you're gunna be in strife

Wipe them over with a damp piece of cloth because if you don't, when you pour the sulphuric acid into the jar with the opal matrix, instantly the chemical reaction starts to take place and heat is also generated. So if you have too much sugar left on the stones they will crack and even crack the glass. It is not until you have done this that you will realize just how much heat is generated.

To give you some idea of how much heat is generated, when you first pour in the acid, the jar becomes that hot that you cannot hold it and if you drop the bloody thing on the kitchen floor, the wife is going to kill you. The opal matrix that is in the jar with the Sulphuric Acid, is now ready to go back in the oven, DON'T BREATH IN THE FUMES.

NOTE: Before you do anything else, place the remaining sulphuric acid in a sealed container and in a position *well out of the reach of children,* as well as mark the bottle DANGEROUS.

Now place the opal matrix back in the oven and reset it to a temperature of 150- 200 degrees F and leave them there for another two days. Ventilate the room to avoid concentration of fumes. You'll probably find it better to buy an old oven or stove and do it in the shed or use smaller jars and use an electric frypan which is even better. It's just that I use to treat a lot of opal matrix and that's why I used an oven instead of the frypan.

No. 5 – DEACID TREATMENT

After the required time has been reached, turn off the oven and allow it to cool at room temperature. Remove the jar from the oven and tip the contents into a dish of lukewarm water. (Note: always put acid into water. Never water into acid!). Place the dish under the tap and turn it on slowly so that the water continually overflows in the bowl or dish.

This should be done until a piece of litmus paper can be placed in the dish without changing colour. This will give the indication whether there is any acid still present.

Once all signs of acid have been removed, take the pieces out of the dish and wipe them on a clean rag, and you should find that the operation has been a success. You slightly heat the opal matrix in clean water but use a glass container, and check it again with the litmus paper which should not change colour.

Make sure that you don't breathe in any of the fumes, always have the area you're working in well ventilated.

There are other methods of treating opal matrix, some less expensive, but takes a lot longer to do and there are more expensive ways of doing it, with sophisticated equipment using heat and pressure, but you need plenty of money and you have to know exactly what you are doing.

When buying opal matrix in the rough, I'ld be a fool if I said you can tell what will and won't treat, even guys that have been treating for years still get bought undone.

The secret is to have a rough idea what will treat and give you a good finished stone when treated. Buyiny opal matrix in a jar already treated can be a bit of a catch, because you have to cut the matrix and treat it again, and hope like hell your treating method is as good or even better, than the guy that last treated it. At least seeing it treated gives you a good idea of how it should turn out.

If you can cut it and treat it and it turns out as good or even better, then you're on the right track, if not you're going to be disappointed. Opal matrix has gone through the roof since I was treating it, so if you're going to buy any, the only way to make any money out of it is to value add. That is, cut it and retreat it again, unless you're going to stick it away for 10 –20 years. Using this treating method you shouldn't have to many problems, it's been around since the1970s, with a lot of success.

…oooOooo…