



Tumbled Citrine

Tumble rocks without destroying them

TUMBLING TIPS

MY TOP TIPS

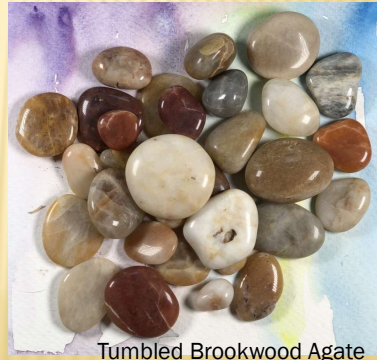
- ✘ 1. Give yourself lots of time, be prepared to fail
- ✘ 2. Use rocks of similar hardness
- ✘ 3. Clean, clean, clean between cycles
- ✘ 4. DO NOT pour used grit down your sink.



Agate

WHY DOES IT TAKE SO LONG?

- ✘ At a minimum, a full set of tumbling can take over a month, depending on hardness and smoothness of rock
- ✘ Cycle 1 - 60/90
- ✘ Cycle 2 - 120
- ✘ Pre-polish
- ✘ Polish
- ✘ Burnish/wash



Tumbled Brookwood Agate

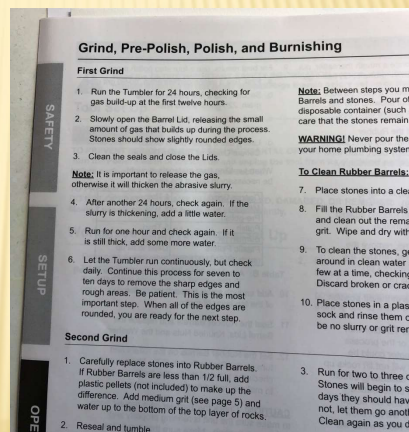
MY TUMBLING STATION



SUPPLIES

- ✘ Grit – 60/90, 120, pre-polish, polish
- ✘ Soap for burnishing: dish soap (2-3 drops), borax (1 TB), Ivory soap (TB of scrappings)
- ✘ Scrub brushes – plastic nail brush, toothbrush
- ✘ NO bleach
- ✘ Plastic or ceramic pellets to keep rock/water levels up
- ✘ Notebook for keeping up with times, cycles, etc.

HOW TO START: READ THIS



BASIC INSTRUCTIONS FROM MIKE

- ✘ Fill the rock tumbler barrel 2/3 to 3/4 full of rocks.
- ✘ Add water to just below the top of the rocks (so you can see it between the rocks, but not covering the rocks).
- ✘ Add grit. (Grit is listed in tablespoons)
- ✘ Close the barrel (make sure it is not too heavy) and start tumbling.
- ✘ Let each step run 5-10 days.
- ✘ Make sure there is no grit transferred from one step to the next.

BASIC INSTRUCTIONS FROM MIKE

- ✘ Add grit. (Grit is listed in tablespoons)

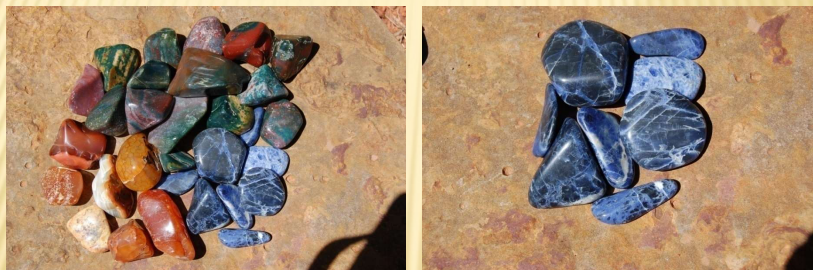
Barrel Size	Step 1	Step 2	Pre-Polish	Polish
1.5#	4	4	6	6
3#	4	4	6	6
4.5#	8	8	10	10
6#	10	12	12	12
12#	20	20	25	25

WHY USE TUMBLING MEDIA?



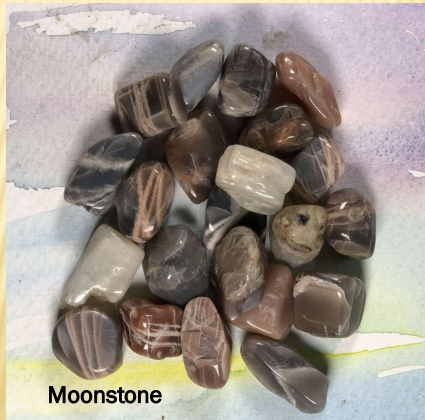
- ✘ These small particles can deliver grit to hard-to-reach rock surfaces, reduce impact forces in the tumbler barrel, cause rocks to tumble rather than slide in the barrel, and serve as a filler when you don't have enough rocks to properly fill the tumbler barrel.

EARLY MISTAKES (MINE, NOT MIKE'S)



HARDNESS

- ✘ MOHS 6-6 ½: Amazonite, Moonstone, Tanzanite. Labradorite, Pyrite

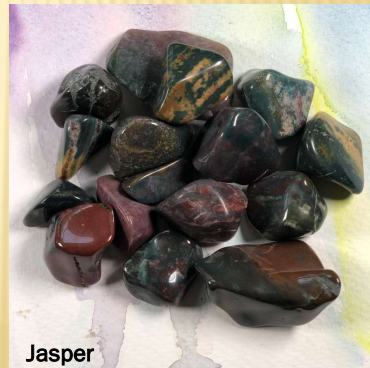


Moonstone

HARDNESS

- ✘ MOHS 7: Chalcedony, Quartz, Tourmaline, Obsidian, Garnet and Jasper

- + Carnelian Citrine
- + Onyx Aventurine
- + Bloodstone Tigers Eye
- + Agate Amethyst
- + Flint



Jasper

HARDNESS

- ✘ MOHS 8: Topaz, Emerald,
 - + Aquamarine
 - + Beryl
 - + Morganite
- ✘ MOHS 9: Corundum
 - + Sapphire
 - + Ruby



HARDNESS

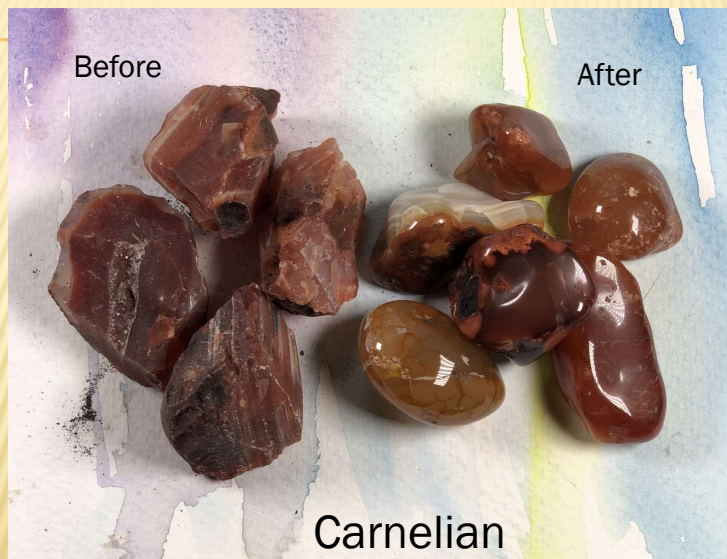
- ✘ Too soft? Maybe.
- ✘ **Calcite**, Chalcopyrite, Celestite, Malachite. Opal, Sodalite, Lapis, Apatite

There's a way but it takes even MORE time.



MY TIPS

- ✘ Rough rocks? Smooth off jagged edges with grinder before tumbling
- ✘ Can't get rocks clean between cycles? Burnish/wash between cycles
- ✘ Use a separate tumbler for each cycle
- ✘ Yes, price matters. When you use cheap materials, you get sub-standard rocks, especially with polish



WHERE TO ORDER

- ✘ <http://www.lortone.com/>
- ✘ <http://www.harborfreight.com/dual-drum-rotary-rock-tumbler-67632.html>
- ✘ <http://therockshed.com/>
 - + Tumbling supplies
- ✘ <http://rocktumbler.com/>
 - + Thumbler's tumblers
- ✘ <http://www.4facets.com/index.html>
 - + Lortone tumblers, grit and supplies
- ✘ <http://www.kingsleynorth.com/>
 - + Lortone tumblers, grit and supplies
- + Yes – even Amazon



HELPFUL HINTS FROM MIKE!

- ✘ Do **not** overload your tumbler
- ✘ Oil the tumbler bushings with a single drop of oil, but do not overdo it!
- ✘ Resist the temptation to tumble rocks with cracks or pits. Grit will get into these pits and contaminate subsequent steps, ruining the polish of the entire load. No amount of scrubbing with a toothbrush will remove all of the grit inside a pit!
- ✘ Use a balanced load that includes both large and small rocks.



MIKE'S RULES TO LIVE BY!

- ✘ **Garbage in means garbage out**
 - + If you start with garbage (low quality rough) you should expect low quality gemstones. So, don't hesitate to:
 - ✘ Discard a rock that is porous.
 - ✘ Break a fractured rock into smaller pieces.
 - ✘ Discard a rock that will not produce an attractive tumble.
- ✘ **Avoid contamination**
 - + You will use a different size abrasive grit for each step of the tumbling process. If coarse grit gets into your fine grit step it will scratch up the rocks and you will need to do the fine grit step over again. So be sure that you thoroughly clean the rocks, the tumbler barrel and your tools when you change from one grit size to another.
- ✘ **Great results take time**
 - + Don't be in a hurry. Spend time doing a great job. If you tumble a batch of rocks through the coarse grind and they still have a few rough edges or are not nicely rounded, don't hesitate to run them through that step again. Also, spend the time needed to thoroughly clean your work area, tumbler barrel and tools between steps to avoid contamination.

MIKE'S HELPFUL HINTS!

- ✘ Don't reuse grit. Silicon carbide loses its sharp edges after about a week's tumbling time and becomes useless for grinding.
- ✘ You can reuse plastic pellets, but take care to avoid contaminating the polishing stages with grit. Use separate plastic pellets for these stages!
- ✘ You can add baking soda, Alka-Seltzer, or a Tums to a load to prevent gas build-up.
- ✘ For smooth river rocks or for any softer stones (e.g. sodalite, fluorite, apatite), you may omit the first coarse grit step.
- ✘ For softer stones (especially obsidian or apache tears), you want to slow the tumbling action and prevent the stones from impacting each other during polishing.
 - + Some people have success adding corn syrup or sugar (twice as much as the amount of prepolysh and polishing agent) to thicken the slurry.
 - + Another option is to polish the stones dry (as in *no water*) with cerium oxide and oatmeal.