

DRUNK TURTLE COCCIOPESTO OPUS PREPARATION PROTOCOL

IMPORTANT TIPS:

- 1.) For preparing the Opus with tartaric acid, use a garden sprayer (see attached images). For removing tartrates via citric acid and sodium carbonate solution use the spray ball (see attached images).
- 2.) DO NOT PRESSURIZE THE OPUS. For closing the lid, either use the stock plastic “pee-valve” that comes with the lid, a pressure releasing bung or a glass colmatore.
- 3.) Always use low pressure for cleaning the Opus via the spray ball. Do not let the solution hit the Opus’s wall at pressures above 2 BARS or 35 PSI.
- 4.) Never use water hotter than 37 C or 100 F for cleaning the Opus and when you use hot water, increase the temperature steadily over time. If suddenly hot water is used, the stainless steel accessories will expand and the cocchiopesto can crack.
- 5.) Never use a high pressure washing jet.
- 6.) Do not go above 15% regarding tartaric acid solution application.
- 7.) Pick Opus off the palette by inserting forklift channels in between or outside the Opus’s feet (see separate unloading diagram).
- 8.) Metals disks that come with Opus can be placed underneath each foot. You can either screw the feet in or out for adjusting or tilting the Opus.
- 9.) If there are any issues with the Opus upon delivery or during use, please contact your sales agent.

**The Drunk Turtle cocchiopesto Opuses are close to a PH of 7 and a small percentage of cement is used to naturally bind the different aggregates together that include: Italian stones, terracotta, clay, marl and sand. Because a small percentage of cement is used in the makeup of the Opus, a small tartaric acid solution application needs to be carried out on the Opus before using it for winemaking and in between uses.*

1.) Cocchiopesto Opus water rinse:

a.) Using neutral water at a PH of 7 (or very close to 7) and either room temperature water or hot water (not hotter than 37 C or 100 F and increase the temperature gradually), make sure to rinse and wet the entire inside of the Opus.

b.) It may be possible that the color of the water is slightly opaque/latte macchiato because of some dust and particles that are on the cocchiopesto’s inside surface from when the doors and accessories were installed.

c.) You can either use your judgement that the Opus has been well rinsed or you can rinse it with water via a recycling system (10% of the Opus’s volume) or fill it completely up with water and leave it overnight:

- Rinse the Opus with at least 10% or more of the Opus’s total volume using a spray ball recycling system for half an hour to an hour like in the photo at the end of the protocol.. Cocchiopesto acts as an absorbent and when the Opus will first

be delivered to you, it will be dry. Therefore, rinsing your Opus with water will allow the cocchiopesto to act as an absorbent that is important for preparing it for winemaking.

- IMPORTANT: Make the pump operate at a low pressure so the spray ball is only gently showering the sides of the Opus.

**The following table helps you calculate approximate volume levels of the different Opuses:*

Opus	Volume (litres)	10% Volume (litres)	10% Volume (gallons)
3.5	375	38	10
10	1052	105	28
17	1800	180	48
25	2700	270	71

3.) Application of tartaric acid:

a.) Using a garden sprayer hand pump (can be found at Home Depot for example with a long nozzle) and a 15% tartaric acid solution, coat the inside and upper lip of the Opus in either 2x or 3x applications. Wear goggles and gloves and long sleeves if possible.

b.) After each application, wait for 24x hours for the tartrate crystals to form. Then rinse opus with ambient temperature water with a PH of 7 before applying the next tartaric acid coating. Upon rinsing with water for the first or second time, do not be alarmed if the water is slightly colored.

c.) In order to calculate how much tartaric acid to use in order to fill the garden sprayer hand pump with a 15% tartaric acid solution, use the following example.

- For a Home Depot garden sprayer hand pump that holds 1x gallon so 3.79 litres:
 - Add 150 grams of tartaric acid for every 1 litre of water:
(150 grams/litre x 3.79 litre = 568.5 grams = 0.569 kg = 1.24 lbs of tartaric acid)
 - For each coating, you want approximately (rough estimate) 20 grams of tartaric acid per square meter of the Opus's surface
- For a Home Depot garden sprayer hand pump that holds 2x gallons so 7.57 litres:
 - Add 150 grams of tartaric acid for every 1 litre of water:
(150 grams/litre x 7.57 litres = 1,135.5 grams = 1.136 kg = 2.5 lbs of tartaric acid)

- For each coating, you want approximately (rough estimate) 20 grams of tartaric acid per square meter of the Opus's surface.

** Depending on if you are using a 1 gallon or 2 gallon garden sprayer, the below sprayer tells you what percentage of the sprayer's volume needs to be consumed per application for applying **20 grams of tartaric acid per square meter of the Opus's interior surface area:***

Opus	15% tartaric acid solution in 1x gallon garden sprayer (grams)	Approximate percentage (%) of 1x gallon garden sprayer that needs to be consumed per application	15% tartaric acid solution in 2x gallon garden sprayer (grams)	Approximate percentage (%) of 2x gallon garden sprayer that needs to be consumed per application
3.5	568.50	13	1,135.50	7
10	568.50	37	1,135.50	18.5
17	568.50	63 <i>*more than half the volume of garden pump</i>	1,135.50	31.5
25	568.50	95 <i>*the entire volume of the garden pump</i>	1,135.50	47.5 <i>*roughly half the volume of the garden pump</i>



Example of a 1x gallon or 2x gallon garden sprayer

- d.) In order to test if the Opus is ready for winemaking use, after the 2nd or 3rd rinse, make a 25% tartaric acid solution and throw it on the interior surface of the Opus. If there is no reaction (bubbling or gas given off), the Opus is ready for use.
- e.) After fermenting inside of the Opus or if you are ready to age inside of the Opus, do not close the Opus with a silicone bung. Do not pressurize the Opus. Either use the stock plastic “pee-valve” that comes with the Opus, a glass colmatore or a pressure releasing bung or system.

4.) Cocciopesto Opus cleaning protocol after use:

- a.) After emptying the Opus of wine, must and lees, use preferably hot water under 37 C or 100F to rinse the inside of the Opus. Cold or ambient temperature water is OK too if hot water is not available.
- b.) If the tartrates are still present and the Opus is still dirty after using hot water, make a 1.5% sodium carbonate and 1% citric acid solution with hot water under 37 C or 100 F if possible and recycle it inside of the Opus for at least an hour to remove the tartrates.
- c.) Make the solution be 10% of the Opus’s volume in a separate bucket or container and pump it inside of the Opus and recycle it using the spray ball in the below image and pump at a low pressure so that you gently spray and wash the inside of the Opus. Periodically check inside of the Opus during the washing.

Use the below table for reference regarding solution volumes and quantities:

Opus	Volume (litres)	10% Volume (litres)	10% Volume (gallons)	1.5% Sodium Carbonate (grams)	1.0% Citric Acid (grams)
3.5	375	38	10	570	380
10	1052	105	28	1,575	1,050
17	1800	180	48	2,700	1,800
25	2700	270	71	4,050	2,700

- d.) Because you are cleaning the Opus with a basic solution, the next time you are going to use the Opus, you will need to re-apply the 15% tartaric acid solution in step 3.

e.) While the Opus is empty, keep the top hatch open or ajar, all valves open and the door open as well to prevent the formation of mold. Upon cleaning the Opus and if you are going to leave it empty for a while, you can use a small fan for ventilating and better drying the Opus too.

Setup for rinsing with water and removing tartrates:

