

An RP System for Cultural Artifacts

By Yoshi Yokouchi & Janet E Reinhold

What is RP System?

RP System™ is a unique atmospheric modification preservation system. It creates an environment free of the elements that could cause your product premature oxidation and deterioration.

The “A” Type of RP System™ removes O₂, H₂O and other corrosive gases, and we recommend its use for preserving metals and electronic parts. The “K” Type of RP System™ also removes O₂ and corrosive gases. However, it is moisture neutral and provides excellent preservation for cultural artifacts. This is the product that we use for time capsules that don’t receive professional preservation.

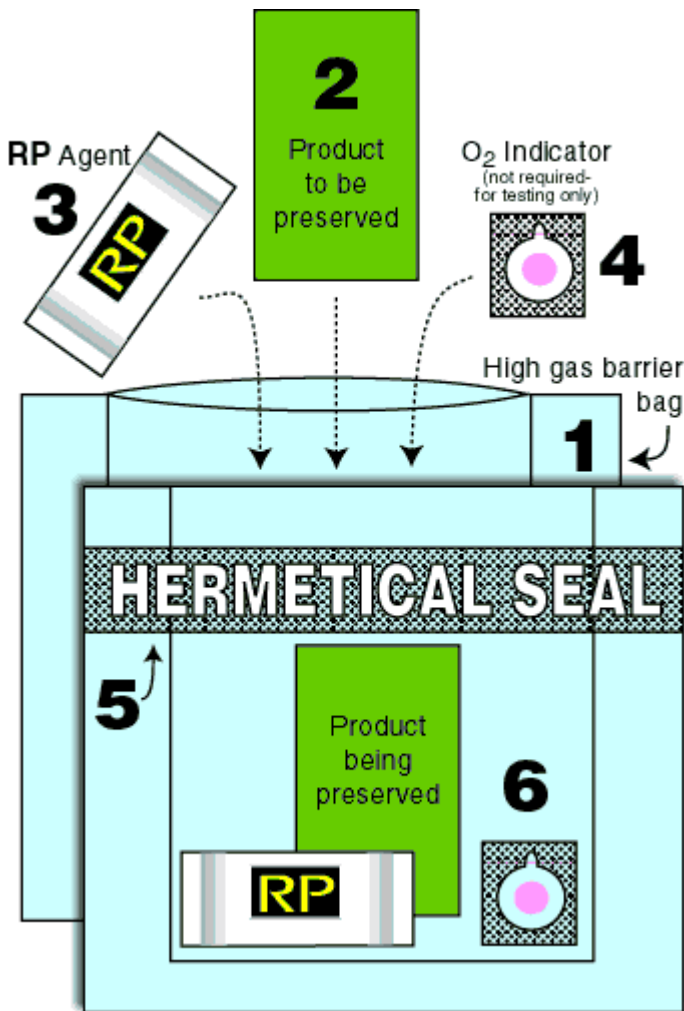


Figure 1. This diagram shows an example of how to use the RP System™. It shows how to use it inside of an MVP™ pouch, but we mostly use it inside of the rigid stainless steel airtight time capsule containers.

Basic Procedure for Using RP-K

- 1) Place the following items in a high gas barrier (moisture vapor proof) bag (or hermetically sealed rigid container such as a time capsule)
- 2) Your Product to be preserved
- 3) Appropriate type and amount of RP Agent. (A-type or K-type depending on product to be preserved)
- 4) An Oxygen (O₂) indicator, this is for testing only, and is not required for proper preservation.

After you have put the items in the container:

- 5) Hermetically seal the container
- 6) Within the container, RP System™ creates an environment free of elements that could cause premature deterioration of your product.

The RP System™ removes from a sealed gas barrier container sources of corrosion and deterioration of metal products caused by oxidation, sulfur degradation or other pollutants or off-gassing processes. (These irreversible chemical reactions occur simultaneously, and gases cannot be re-released once absorbed.) With the A type, the relative humidity falls below 10%; with the K type, the initial humidity is maintained. The oxygen concentration falls below 1%. Corrosive gases are reduced to less than 1 ppm within hours.

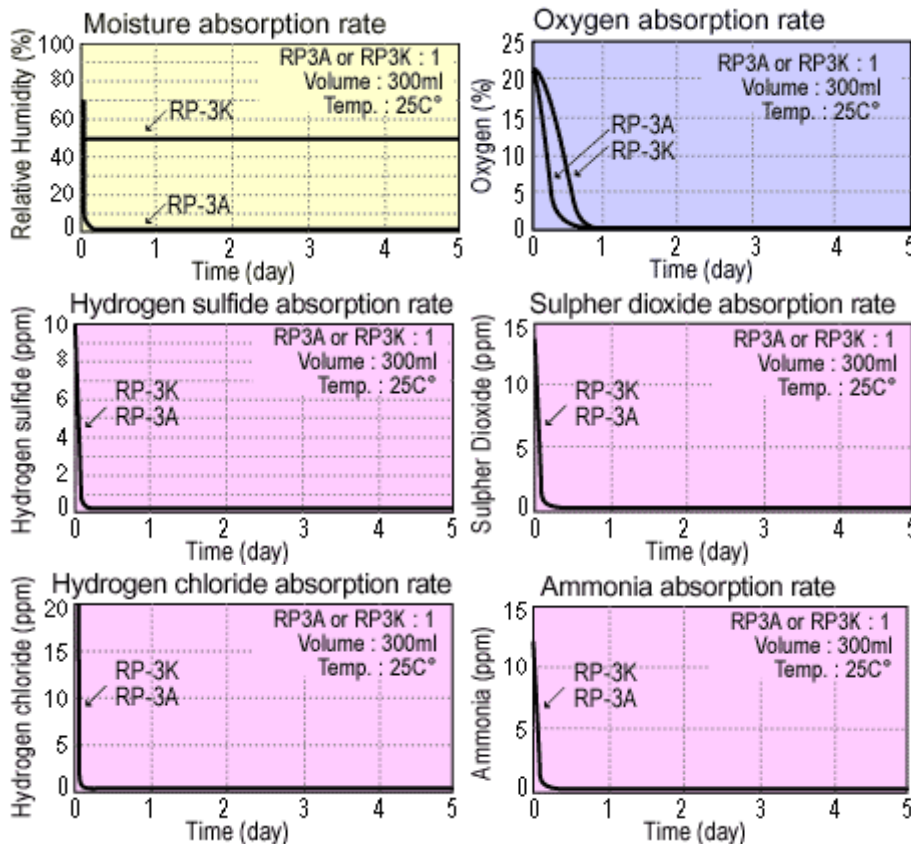


Figure 2. The above graphs represent the results of experiments performed by MGC and are not a guarantee of actual performance.

RP System™ K-type

Uses:

RP System™ K-type agent removes O₂ and corrosive gasses, but is moisture neutral, making it possible for the user to control the relative humidity within the container.

This new K-type agent was developed for the conservation of "one of a kind" cultural artifacts which are made of paper, cloth, wood, etc. K-type offers environmentally safer alternatives to insecticide or fumigation.



<i>Product View</i>	<i>Product ID</i>	<i>Size</i>	<i>Capacity cc</i>	<i>Capacity in³</i>
	RP-3K 56-RP3K	35 x 120 mm Pack of 25	300 cc 7500 cc	18.31 cu in 458 cu in
	RP-5K 56-RP5K	51 x 120 mm Pack of 25	500 cc 12,500 cc	30.51 cu in 763 cu in

Figure 3. RP-3K and RP-5K Packets (the first Product ID is Mitsubishi's; the second Product ID is FPP's)

Contact & Reference Information:

FPP's website is at <http://www.futurepkg.com>. RP-K information at Mitsubishi's website: <http://www.mgc-a.com/rpsystem/rpsys.html>.

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