

Description

Paratone-N is a “cryoprotectant” for both small and large molecule crystallography. Mildly air unstable small molecule compounds can be coated with Paratone-N under an inert atmosphere. The Paratone-N protected crystal sample can be cryocooled in a chilled nitrogen gas stream. Paratone-N has also been used successfully as a cryoprotectant for biological macromolecule crystals.

Application

When using 100% Paratone-N, place a small amount of Paratone-N on a glass slide or dish. Place the crystal (using a pipet or CryoLoop or capillary) in mother liquor into the Paratone-N. Paratone-N is not miscible with most salt/buffer/polymer reagent mixtures and the crystal will rest in the mother liquor, encapsulated by Paratone-N. Use the immiscibility and viscosity of Paratone-N to remove most of the mother liquor from the crystal by using a CryoLoop or other probe to move the crystal through the Paratone-N. The viscosity of the Paratone-N will help to pull the mother liquor from the crystal. Mount the crystal, surrounded with Paratone-N in a CryoLoop (macromolecule) or on a pin (small molecule). Paratone-N can be flash cooled.

Diluting

Paratone-N can be mixed with Paraffin Oil (Catalog Number HR3-411) to attain a less viscous material. When mixed with Paraffin Oil, one typically uses 25 to 50% Paraffin Oil with the 75 to 50% Paratone-N.

Property Test

Property Test	Results
Product Name	Paratone-N
Product Number	HR2-643
Lot Number	264302
Color	Clear to Opaque
Relative Density	0.877 at 60 ° F
Density at 15 ° C	(7.32 lbs/gal, 0.88 kg/dm ³)
Flash Point [Method]	175 ° C ,(347 ° F) [ASTM D-93]
Boiling Point	N/A
Vapor Density (Air = 1)	N/D
Vapor Pressure	Negligible

Property Test (continued)

Property Test (continued)	Results
Evaporation Rate (n-butyl acetate=1)	N/A
pH	N/A
Solubility in Water	Negligible
Viscosity	N/D

References

H. Hope (1988) Cryocrystallography of biological macromolecules: a generally applicable method. Acta Cryst. B44, 22-26.

Technical Support

Inquiries regarding Paratone-N, interpretation of screen results, optimization strategies, and general inquiries regarding crystallization are welcome. Please e-mail, fax, or telephone your request to Hampton Research. Fax and e-mail Technical Support are available 24 hours a day. Telephone technical support is available 8:00 a.m. to 5:00 p.m. USA Pacific Standard Time.

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