

Technical Data Sheet

Thiocarbohydrazide (TCH)

#21900

- 99% minimum purity - NH₂ NHCSNHNH₂
- Pure white crystalline form M.P. is 172°C
- Indefinite shelf-life due to purification procedure
- Does not need to be kept refrigerated

Staining method:

(OTO) This staining method (osmium fixed tissue exposed to TCH followed by a second treatment with osmium) enhances the contrast of all osmophilic components of the cell, especially lipids, which hold the most osmium.

Osmium tetroxide fixed tissue is embedded in Araldite, sectioned (ultrathin), and placed on nickel, or gold grids, without a supporting membrane. They are then exposed to a 1% hot aqueous solution of TCH for 1 hour at 50°C, followed by several washes with hot water (50°C) for 10 to 15 minutes to remove any unbound TCH. The sections are then exposed to OsO₄. There are two methods for the second OsO₄ exposure: (1) exposure to OsO₄ vapor for 1 hour in a closed vial suspended in a 60°C water bath or, (2) treating the grids with a 2% solution of OsO₄ (unbuffered) at 50°C for 1 hour followed by a brief wash.

Reference:

Seligman, A. M., et al, Journal of Cell Biology, 30:424 (1966).