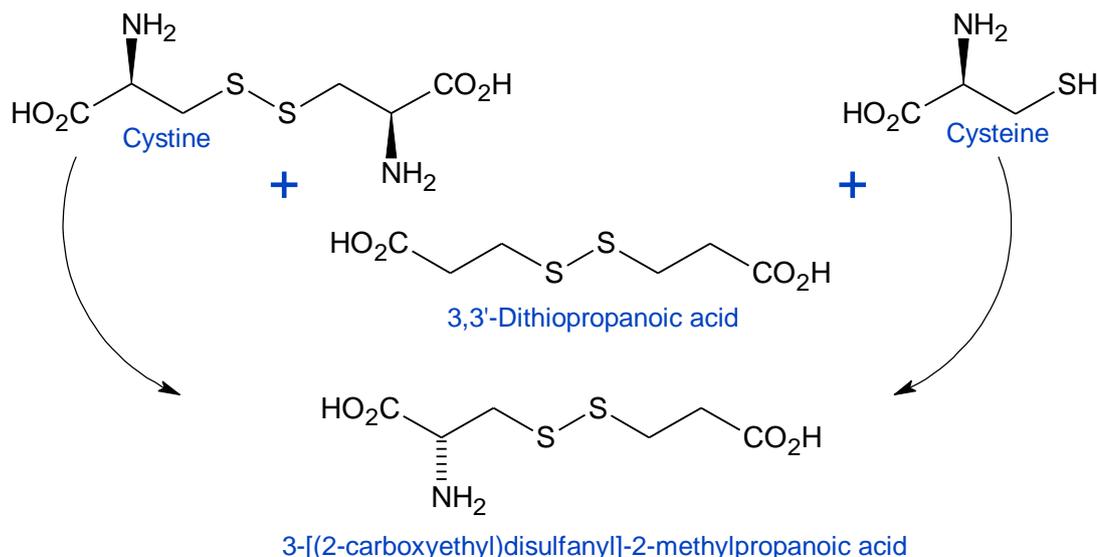


**Full Name:** 3,3'-DITHIODIPROPANOIC ACID  
**Short Name:** DTDPA  
**Part Number:** 5062-2479 Dithiodipropionic (DTDPA) reagent, 5 g  
**Type:** Other for HPLC  
**Memo:** Also named DTDP. Procedure according to the inventor in: "Amino Acid Analysis: Determination of Cysteine plus Half-Cysteine in Proteins after Hydrochloric Acid Hydrolysis with a Disulfide Compound as Additive"; Vibeke Barkholt and Arne L. Jensen, *Anal.Biochem.* 177(2) (1989) 318-22.

**Melting Point:** 155-158 °C  
**Boiling Point:** NA  
**Molecular weight:** 210.27 g/mol  
**Density:** NA  
**Applicable Groups:** Amino Acids  
 Cystine/Cysteine

**Structure/  
Reaction:**



**Procedure:** Hydrolyze proteins at 110 °C either wet or in gas phase. Wet hydrolysis was carried out in pyrolyzed, sealed, evacuated tubes with 100 µL of 6M-HCl, 0.05% phenol and 5 µL of 1% DTDPA in 0.2M-NaOH. For gas phase hydrolysis the protein was transferred to pyrolyzed tubes fitting the autosampler together with 5 µL of 1% DTDPA in 0.2M-NaOH and 10 µL of isopropanol and dried in a Speed-Vac centrifuge. These tubes were placed in evacuated glass containers with 100 µL of 6M-HCl, 0.05% phenol in the bottom. After hydrolysis, samples were dried and dissolved in chromatographic buffer A, and 1-80 µL was injected.

Buffer A was 0.20 M sodium citrate containing 0.05% phenol and 5% isopropanol, made from 19.6 g trisodium citrate-2-hydrate, 0.5 g phenol, 50 ml isopropanol, and 12 mL 65% nitric acid, made up to 1 liter and adjusted to pH 3.10 at 20 °C with nitric acid.

**Risk/Safety:**

- R36 Irritating to eyes
- R37 Irritating to respiratory system
- R38 Irritating to skin
- S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advise
- S27 Take off immediately all contaminated clothes
- S28 After contact with skin, wash immediately with plenty of water (unless otherwise specified)
- S29 Do not empty into drains
- S30 Never add water to this product
- S33 Take precautionary measures against static discharge
- S35 This material and its container must be disposed of in a safe way
- S36 Wear suitable protecting clothes