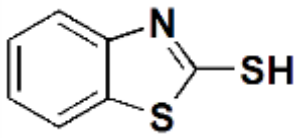
MBT Matrix Protocol and Product Information Sheet

Product Category:	UltraPure MALDI Matrices
Catalog Number(s):	p9106-25mg, p9106-5x10mg, p9106-4x25mg, p9106-1gm
Product Name:	MBT Matrix
Alternative Name(s):	2-Mercaptobenzothiazole
CAS Number:	149-30-4
Chemical Formula:	$C_7H_5NS_2$
Molecular Weight:	167.25
Wavelength (λ_{max}):	327nm
Storage:	Upon receipt store at 20°C (shipped at ambient temperature).



Since there are many preparations and a wide variety of techniques where 2-Mercaptobenzothiazole and other MALDI matrices are used, below is intended to be only a general protocol or a starting point, not necessarily the best for your particular application.

MBT MALDI Matrix Preparation (Dried Droplet Method)

1. Dissolve the MALDI matrix at a concentration of roughly 10 mg/mL in 33% THF, 33% Ethanol, 33% Water (or other suitable solvent composition). Vortex vigorously.

**note: A 1-5 mg/mL solution of matrix can also be employed if desired, especially if your solvent system has more stringent solubility limitations.*

2. Mix the MBT matrix solution with sample at a 1:1 Matrix:Sample. (recommended solvents below)

Sample	Solvent Recommended
Protein	50% Water, 50% Acetonitrile, 0.1% TFA (v/v)
Peptide	50% Water, 50% Acetonitrile, 0.1% TFA (v/v)
Carbohydrates	33% THF, 33% Ethanol, 33% Water (or 50% Ethanol, 50% Water)

3. Apply 0.2 to 1.0 µL of this solution onto the MALDI sample plate.
4. Allow the matrix:sample to co-crystallize through evaporation at room temperature.
5. Place MALDI plate in MALDI-MS Ion Source and analyze samples.

Thin Layer Method is also a good option, although not covered in this product sheet.

References:

Xu, Naxing, Zhi-Heng, Huang, Watson, J. Throck, Gage, Douglas. J. Am. Soc. Mass Spectrometry, 1997, 8, 116-124.

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