Sinapinic Acid Protocol and Product Information Sheet

**Product Category:** Ultrapure MALDI Matrices  
**Catalog Number(s):** p9102-25mg, p9102-5x10mg, p9102-4x25mg, p9102-1gm  
**Product Name:** Sinapinic Acid  
**Alternative Name(s):** Sinapic Acid; SA Matrix; 3,5-Dimethoxy-4-hydroxycinnamic acid  
**CAS Number:** 530-59-6  
**Chemical Formula:** C_{11}H_{12}O_{5}  
**Molecular Weight:** 224.21  
**Wavelength:** 337 nm, 353 nm

There are many preparations and a wide variety of techniques where Sinapinic acid and other MALDI matrices are used. Below is intended to be only a general protocol or a starting point.

**MALDI Matrix Preparation (10mg/mL Stock)**

Dissolve 10mg of matrix in 1.0 mL of 50% acetonitrile, 50% proteomics grade water and 0.1% TFA. Vortex vigorously. (Other solvents may be used, such as ones containing higher acetonitrile concentrations, such as 70%; lower concentration of TFA, such as 0.01%; or replacing acetonitrile with methanol, etc.).

**Sample Spotting (use one of the two methods below):**

**Dried Droplet Method**

1. Mix the matrix stock solution with sample.  
2. Apply 0.2 to 0.6 µL of this solution onto the MALDI sample plate.  
3. Allow the matrix:sample to co-crystallize through evaporation at room temperature.  
4. Place MALDI plate in MALDI-MS Ion Source and analyze.

**Thin Layer Method (Matrix spotting should be done in organic solvent for fast evaporation)**

1. Prespot MALDI-MS sample plate with 0.5-1.0 µL of MALDI matrix stock solution.  
2. Allow this spot to evaporate to dryness.  
3. Dispense 0.2 to 0.6 µL of protein sample solution (in acetonitrile / water cosolvent).  
4. Allow matrix:sample crystals to form through solvent evaporation.  
5. Place MALDI plate in MALDI-MS ion source and analyze.

*Note: Spotting additional matrix stock solution on top of sample (sandwich method) can also be used.*