

## **DNA SAMPLE/MATRIX PREP FOR MALDI**

### SAMPLE PREP METHODS FOR MALDI DNA Analysis

1. HPA and DAC, matrix solution of hydroxypicolinic acid (3-HPA) and diammonium citrate (DAC) . The two solutions are kept separately in stock solutions and added together when needed.
  - 1.1. HPA: 0.25g (+/-)0.05g Hydroxypicolinic acid dissolved in 2.5mL ACN + 2.5mL H<sub>2</sub>O solution. Vortex until solid has completely dissolved. If solid does not dissolve completely save supernate only. This solution can be stored at 4°C or at room temperature for 2 weeks.
  - 1.2. DAC: 0.25g DAC in 5mL H<sub>2</sub>O.
  - 1.3. Combined Matrix Solution (CMS): Add 0.8mL of the HPA solution with 100µl of DAC solution.
  - 1.4. SPOTTING SAMPLES:
    - 1.4.1. METHOD 1: Spot 1-2µl of DNA sample to the wells of the mass spec plate. After the sample has dried, I add 1.0µl of CMS to the well of the sample plate. Place the sample plate in front of a small fan to speed drying of the matrix.
    - 1.4.2. METHOD 2: Mix 5µl of DNA sample (1-10 µM solutions in H<sub>2</sub>O) with 5µl CMS. Spot 1-2µl per well of 100 well sample plate, adjust volume according to sample plate employed.
2. See Voyager User's Guide for additional information.