

DMT Testing Instructions

General Testing Guidelines

1. All operators are expected to complete their testing within reasonable proximity to the assigned time for testing
2. The operator will check off on the master **testing assignment list** when the test has been satisfactorily completed
3. An operator will not begin testing if the previously assigned operator has not completed their testing assignment
4. All reports generated will be three hole punched and inserted into the binder assigned to each instrument
 - a. Each type of test will be separated into sections (i.e. **Linearity Testing**)
5. If an instrument generates an error during a testing sequence, the following documentation must be provided
 - a. Put the original error report in the appropriate section of the binder pertaining to the test that was being attempted (ex. If a pump error occurred during a **Linearity Test**, the original report would be filed in the **Linearity Test** section)
 - b. Reprint a second copy of the error report and file it in the binder in the **Error Reports** section
 - i. The **Error Reports** section is only for instrument generated failures (ex. Pump Error)
 - ii. If the error is due to a concentration out of range or similar problem, **do not** file a second report under the **Error Reports** tab, however a note **does** need to be written in the notebook
 - c. Make a note in the notebook detailing the error
 - d. All handwritten notes must include date and initials**
6. If solutions seem to be running low / out of specifications, the DMT Lead will be notified and new solution will be used
7. All simulators will be labeled with the lot number of the solution which they contain and the date on which it was added

Accuracy & Precision / Linearity Testing

1. A diagnostic test will be performed prior to running concentrations
2. All 4 concentrations (.02, .08, .16 and .40) will be run on the same day
3. A purge sufficient to clear the simulator tubes of condensation will be performed each time a new simulator is attached
4. The DMT settings will be adjusted to reflect the corresponding simulator concentration each time a new concentration is used
5. Attach the simulator to the tower on the side of the DMT and connect the temperature cable
6. An Accuracy and Precision test (n=10) will be used for each concentration
7. The following user information will be entered
 - a. The Supervisor name entered will be the operators initials
 - b. The correct solution lot
 - c. The correct solution concentration

Interference Testing

1. The interference solution will be tested using the “Mouth Alcohol Test” sequence under the protocols menu (n=6)
2. The following information will be entered
 - a. The nominal solution concentration will be entered into the subject name box (ex. 0.04 MeOH in H₂O or 0.01IPA in 0.08 EtOH)
 - b. Operator initials into the operator name boxes
 - c. In the comments box, the lot number of the solution and the actual concentrations will be entered (ex. 07-12-04A .02 IPA in 0.0443EtOH)
3. The interference solution will be blown through the simulator into the breath tube
4. Detach the simulator from the breath tube between sample to allow for purging

Breath Volume Accuracy Testing

1. Run the Mouth Alcohol Test sequence (n=6)
2. The following information will be entered
 - a. The assigned volume to be tested will be entered into the subject name field (ex. 1.6 Liters)
 - b. Operator initials into the operator name boxes
 - c. **Breath volume accuracy test** will be typed into the comments field
3. Set the syringe to the 1.1L. The bottom of the plunger should be even with the line delineating the appropriate volume.
4. When directed by the DMT, attach the syringe tube to the DMT breath tube and slowly and steadily press the plunger on the syringe to force the air into the DMT.
5. Once all of the air has been forced into the DMT, disconnect the syringe from the breath tube. Reset the syringe to 1.2L and repeat. Repeat for all volumes up to 2.0L at 0.1L intervals
6. For volumes less than 1.5L, the DMT should not accept a sample. Continue on to the next volume while still on the same breath sequence. The DMT allow 2 minutes to deliver a complete sample per breath sequence. Detach the syringe tube from the breath tube between breath sequences to allow for purging
7. Repeat until all volumes have been completed. This may take more than one Mouth Alcohol Test sequence (n=6) to get all the breaths. If you use a second sequence, type **Breath vol accuracy test contd** into the comments field

Simulated Mouth Alcohol Testing

1. Run the 0.40 simulator solution on the simulator pump for **10** minutes to prime the tygon tubing.
2. Attach the 0.40 EtOH condensation-filled tygon tubing to the out-port on the 0.08 simulator
3. Insert a mouth piece between the 0.40 EtOH tygon and the breath tube.
4. Using the Mouth Alcohol Tester sequence, blow the simulated mouth alcohol with a body burden through the DMT (n=6)
5. Detach the simulator from the breath tube between samples to allow for purging

6. The following information will be entered

- a. The .08EtOH lot number will be entered in to the first subject name field and “test” will be entered into the last name box
- b. Operator initials into the operator name boxes
- c. In the comments field, the following should be written: **mouth alc: .40 tygon 0.08xx** (actual concentration) **sim**