Solutions Common To ALL Analyses

**Blank** = Nanopure water from same source as calibration standards or standard matrix if standards prepared in a solution other than water. Sampled as calibrant, after calibration, after every 10 samples, and at end of run.

**CCV** = Mid-Range calibrant. With DRD methods, this is prepared from the bulk calibration solution according to the dilution (ADF) specified on the run worksheet. Sampled as calibrant, after calibration, after every 10 samples, and at end of run.

**External Source QC** See "Quality Control Preparation Table" for prep instructions. Sampled from standard rack 3 X’s following initial calibration. Omnion only calculates %RSD (aka %CV). User must calculate bias, which should be +/-10% or less:

\[
% \text{Bias} = \frac{\text{Mean Measured Value} - \text{Theoretical Value}}{\text{Theoretical Value}} \times 100
\]

**Unspiked** = Mid-Range sample. Concentration must not exceed high standard – amount added as spike. Can either pour twice, or move vial to sample set after sampling as 'Unspiked'. Sampled once following initial calibration.

**Spiked** = Sample used for unspiked + known amount of each analyte. See 'Spiked Sample Prep Table" for prep instructions. Sampled immediately after Unspiked.

**Dilutor Check** = Usually 50% Stock Standard. In dual chemistry methods, mixing equal parts of each stock is the norm. In single chemistry methods, stock can be mixed with water 1:1. Check template to confirm prepared concentration. Sampled after calibration and at end of run and diluted as specified on run worksheet.

**Total-N Digestion Checks**

**Ammonia Digestion Check** (1.9 ppm) = 950 µL of 100 ppm Ammonia-N Stock diluted to 50 mL. Sampled after calibration and at end of run.

(100 ppm *Ammonia-N Stock*: 0.2359 g Ammonium Sulfate / 500 mL)

**Nicotinic Acid Digestion Check** (1.9 ppm) = 950 µL of 100 ppm Nicotinic Acid-N Stock Diluted to 50 mL. Sampled after calibration and at end of tray.

(100 ppm *Nicotinic Acid-N Stock*: 0.4397 g Nicotinic Acid / 500 mL)
Total P Inorganic Spike and Digestion Check

**Inorganic P Stock (1000 ppm):**
1.073g Sodium Pyrophosphate / 250 mL

Dilute 200 µL to 250 mL in water to make **Inorganic Digestion Check**

Sampled after calibration and at end of run.

Dilute 1 mL to 10 mL in water to make **Inorganic Spike Stock**

**Inorganic Spike:**
Spike 5 mL sample with 20 µL Inorganic Spike Stock.

Sampled immediately after Unspiked.
Total P Organic Spike and Digestion Check

**Organic P Stock (1000 ppm):**
2.407 g Glycerol-2-Phosphate / 250 mL

Dilute 200 µL to 250 mL in water to make **Organic Digestion Check**

Dilute 1 mL to 10 mL in water to make **Organic Spike Stock**

**Organic Spike:**
Spike 5 mL sample with 20 µL Organic Spike Stock.

Sampled immediately after Inorganic Spike.

Sampled after calibration and at end of run.