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*** Technical Fact Sheet ***
Tips For Successful Sample Packaging And Transport to The Laboratory

How samples are handled following collection is critical to ensuring that the analytical results are technically valid and legally defensible. The temperature and condition of the samples upon receipt at the laboratory is vital information. After samples are collected, it is important that the samples be handled correctly and in accordance with EPA guidelines. Below are some suggestions for packaging and handling your samples for the best results.

- Place all samples in a cooler. Use plenty of ice or blue ice. The temperature of the cooler should be maintained at ≤ 4°C until it is opened at the laboratory. If you use ice, seal the ice in zip-lock type bags. You can prepare your own ice blocks by filling zip-lock bags with water, sealing, and freezing overnight. It is often a good idea to place the ice bag inside a second zip-lock bag to avoid leaks.

- Package ice and samples in a fashion so that when the ice melts, it doesn't contact the samples. This will prevent sample labels from detaching, potential cross-contamination, and a leaking cooler.

- If required, make sure you are using sample preservatives (for groundwater, wastewater, drinking water, etc.). ELN provides pre-preserved sample containers at no charge to our clients.

- Use water-resistant ink to label the samples (for example, a Sharpie).

- Collect the proper documentation (to include sample ID, location, date and time of collection, collector's name, preservation type, sample type and any special remarks about the sample), labeling of sample containers to include a unique sample ID, use of appropriate containers, adherence to holding times, and sample volume requirements.

- Seal any associated paperwork, such as a chain-of-custody form in a zip-lock bag. This will keep the chain-of-custody dry, legible, and intact.

- Always place glass containers upright, do not pack tightly, and use plenty of packing material (bubble wrap works best). This helps prevent breakage during cooler transport and handling.

- Collect (2) 40-ml VOA samples for each volatile analysis per location when sampling for volatiles. Place the VOAs in bubble wrap bags. Use one zip-lock per sampling location, (2) VOAs per bag. This helps prevent possible cross-contamination and segregates your samples in case of breakage.

- Some samples have very short holding times. For example, hexavalent chromium must be performed in 24 hours, pH within 15 minutes, and enterococcus within 6 hours.

Deliver the samples to the laboratory as soon as possible following sample collection. This allows adequate time for analysis of your samples. It also prevents expedited turn-around-time charges to maintain holding times.

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Jenny Douglas, President
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