The outer tube of the ceramic D-Torch is made from sialon, which is a ceramic material derived from silicon nitride. Sialon is one of the most durable and strongest ceramic materials known and maintains these properties at high temperatures. A combination of high temperature and salt deposits causes a quartz torch to devitrify. Higher concentrations of elements in the ICP-OES analysis of Brine can cause a quartz torch to devitrify and result in poor repeatability and stability. Using a ceramic D-Torch does not devitrify and is not affected by salt deposits. The ceramic D-Torch is made from sialon, which is a ceramic material derived from silicon nitride. Sialon is one of the most durable and strongest ceramic materials known and maintains these properties at high temperatures. A combination of high temperature and salt deposits causes a quartz torch to devitrify. Higher concentrations of elements in the ICP-OES analysis of Brine can cause a quartz torch to devitrify and result in poor repeatability and stability. Using a ceramic D-Torch does not devitrify and is not affected by salt deposits. The ceramic D-Torch is available for a range of ICP models, including those from PerkinElmer, Agilent, and Bruker. A ceramic D-Torch is also available for the Thermo iCAP and Optima models. The ceramic D-Torch has an interchangeable outer tube so that you can replace the outer tube when it fails rather than replacing the whole torch. The ceramic outer tube is of particular benefit for the analysis of aqueous matrices, where quartz outer tubes often suffer from short lifetime. It is also beneficial for Si determinations, where quartz outer tubes often produce high background signals. In general, the ceramic outer tube has a much longer lifetime, greatly reducing interruptions and downtimes due to torch failure. In addition to outer tubes, the D-Torch also features an interchangeable injector. This allows the analyst to have a specific injector for each application whether it be for aqueous, organic, high dissolved solids or HF. Injectors made from high quality quartz, alumina and sapphire are available in a variety of internal diameters to suit your application needs.

Customer Comments

* "The ceramic torch is quite excellent. It forms much less deposits on it and that which forms is usually very easy to clean. I do think we'll continue buying ceramic torches mostly because they last much longer and are so much easier to keep clean." - Environmental Laboratory - Sweden

* "I am quite pleased with the D-Torch. It's quite excellent for analyzing silica in a hydrofluoric digestion, I noticed my blanks were much lower and stable." - Contrasting laboratory - Sweden

* "The ceramic outer tube has been in almost constant service 22 hours a day, 6 days a week since we purchased the D-Torch and we have had no issues." - Lubricating oils laboratory - Australia

At a plasma gas flow rate of 10.0 L/min a more robust plasma is formed on both the ICP and Optima, resulting in a slight increase in sensitivity and a lower baseline for most wavelengths. The nebulizer efficiency and plasma stability results are nearly identical at both plasma gas flow rates. This proves that there is no loss in ICP performance at a lower plasma gas flow. In summary, the ceramic D-Torch provides the analyst with reduced Argon consumption and a more robust plasma, where a quartz torch would fail. The expected life time of the ceramic D-Torch is at least 5 times that of a quartz torch when dealing with difficult matrices, making the ceramic D-Torch a cost effective solution to reduce some of the traditional consumable costs associated with ICP.