

Thermo Electron Corporation's iCAP 6000 Series of ICP Emission Spectrometers utilize innovative new technologies to create the world's most compact system capable of outstanding performance and productivity.

iCAP 6000 Series Duo Sample Handling Kits

Produce the very best performance, whatever the sample type.



The performance heart of any ICP instrument is its sample handling system. Although it is possible to use a single configuration for most types of analysis, this may result in sub-optimal performance for some sample types. The Duo view system of the iCAP 6000 Series offers the option of using either axial or radial view to provide the widest choice of alternatives.

Furthermore, the iCAP 6000 Series has a number of optimized sample handling kits available, covering the main application types, to reduce performance problems. These are all plug and play, self-aligning kits. Routine cleaning and alignment operations are extremely simple to carry out. The semi-demountable torch module simply clips into place while automatically making gas-tight connections.

A software controlled torch aligning routine completes the process.

The standard sample handling kit is fitted to all systems and optional kits for organics, volatile organics, HF-based and high solids solutions are available to fit Duo view systems.

The axial view mode is preferred for clean water analysis, such as drinking water, where it gives the best detection limits. However, in situations where high interferences may be encountered, the radial mode may provide better performance. For organics like lubricating oils, it is likely that the dedicated Radial view system is best.

Two types of pump tubing are available, one for use with aqueous-based solutions and one for organics-based solutions.

Whatever the sample, the iCAP 6000 Series has the answer.

Standard kit

For normal aqueous sample solutions containing relatively low acid contents (except for hydrofluoric acid) or up to 3 % m/v dissolved solids. The axial view system is especially good for clean (i.e. drinking) water and some environmental samples which require the best detection limits.

Organics kit

For sample solutions containing relatively non-volatile organic solvents, such as xylene, toluene, white spirit and kerosene. The Duo option is not recommended for use in lubricating oils analysis, especially of wear metals in used oil. Dedicated radial view ICP systems are likely to be better suited to this type of analysis.

Volatile organics kit

For sample solutions containing the more volatile organic solvents, such as some ketones, alcohols and aldehydes. These are often found in petrochemical analysis, both for by-products such as plastics and for petrol itself. An additional cold water supply or chiller is required to cool the spray chamber.

HF resistant kit

For sample solutions containing un-complexed hydrofluoric acid. These are typically obtained during the analysis of geological samples, soils, sediments, ceramics, bricks and cement together with some types of high temperature alloys.

Components in contact with the solutions are made from resistant fluoro plastic and alumina ceramic.

High solids kit

For the purposes of ICP analysis, high solids is defined as up to 20 % m/v solutions, especially samples such as sea waters, brines and ground waters, geochemical samples and fusion mixtures. Used in conjunction with the argon humidifier (Part number 8423 120 51301) allows for extended analysis time.

STANDARD KIT FOR DUO ICP SYSTEMS, PART NUMBER 8423 120 51291, CONSISTS OF:

Duo quartz torch	8423 120 51241
Quartz center tube, 2 mm ID	8423 120 51371
Duo spray chamber adaptor	8423 120 51251
Glass spray chamber	8423 120 51411
Concentric glass nebulizer	8423 120 51431
Ball joint clip	8423 120 51421
Pump sample tubing, aqueous	8423 120 51511
Pump drain tubing, aqueous	8423 120 51521

ORGANICS KIT FOR DUO ICP SYSTEMS, PART NUMBER (8423 120 51201) CONSISTS OF:

Duo quartz torch	8423 120 51571
Quartz center tube, 1 mm ID	8423 120 51571
Duo spray chamber adaptor	8423 120 51571
Spray chamber, organics	8423 120 51311
V-groove nebulizer	8423 120 51321
Ball joint clip	8423 120 51581
Pump sample tubing, organics	8423 120 51531
Pump drain tubing, organics	8423 120 51541

VOLATILE ORGANICS KIT FOR DUO ICP SYSTEMS, PART NUMBER (8423 120 51211) CONSISTS OF:

Duo quartz torch	8423 120 51241
Quartz center tube, 1 mm ID	8423 120 51341
Duo spray chamber adaptor	8423 120 51251
Spray chamber, jacketed organics	8423 120 51441
V-groove nebulizer	8423 120 51321
Ball joint clip	8423 120 51421
Pump sample tubing, organics	8423 120 51531
Pump drain tubing, organics	8423 120 51541

HF RESISTANT KIT FOR DUO ICP SYSTEMS, PART NUMBER (8423 120 51221) CONSISTS OF:

Duo quartz torch	8423 120 51241
Ceramic center tube, 2 mm ID	8423 120 51361
Duo spray chamber, HF	8423 120 51461
Mira Mist nebulizer	8423 120 51471
Pump sample tubing, aqueous	8423 120 51511
Pump drain tubing, aqueous	8423 120 51521

HIGH SOLIDS KIT FOR DUO ICP SYSTEMS, PART NUMBER (8423 120 51231) CONSISTS OF:

Duo quartz torch	8423 120 51241
Quartz center tube, 2 mm ID	8423 120 51371
Duo spray chamber adaptor	8423 120 51251
Spray chamber organics	8423 120 51311
Aerosalt nebulizer	8423 120 51331
Ball joint clip	8423 120 51421
Pump sample tubing, aqueous	8423 120 51511
Pump drain tubing, aqueous	8423 120 51521