



## X-RAY Spectrochemical Sample Preparation Equipment & Accessories

Home About Us Establish Online Account Contact Us Sales Policy Legal Agreement Download Catalog

### DIRECTION CENTER

Navigation from the Direction Center will provide access to the gateways on Technical Information, XRF Sample Cups, details on each Series of sample cups, Accessories for XRF Sample Cups and compliance with European Council Directive, RoHS.

XRF Sample Cups with common functions and attributes are categorized and placed in individual Series. Peruse the brief descriptions of each Series and examine the representative sample cup images. For clarity, the sample cup images are vertically illustrated in the order of each individual component assembly. Click on the item of interest in the border.

#### Gateway to Technical Information on XRF Sample Cups

- Trace analyte impurities
- Melting Points
- Softening Temperatures

Chemplex XRF Sample Cups are manufactured "in house" from a proprietary high density polyethylene, HDPE, specially formulated for this application and in compliance with the EC RoHS Directive with respect to the presence and concentration levels of certain elements.

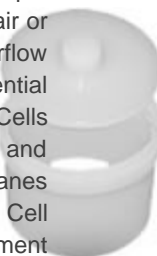
#### Gateway to "How to Select a Sample Cup"

A simplified method to determine "How to Select a Sample Cup" is described based on taking three measurements of the instrument sample holder and comparing them against the measurements furnished for each sample cup catalog number: the outside diameter of the sample holder, the clearance height and the diameter of the aperture. Click on color border for more details including sample cup attributes.

**SERIES 1000: Double and Single Open-Ended Sample and SpectroSulfur™ Analyzer Sample Cups with TrimLess™ Thin-Film Sleeve and ThermoPlastic™ Seal Venting Features**



Double open-ended Cells enable pre-attachment of thin-film sample support windows in advance and top sample filling for analysis in air or helium. Single open-ended Cells integrate External Overflow Reservoirs and puncturable ThermoPlastic™ Seals for differential pressure equalization. In common with double and open-ended Cells are extra wide TrimLess™ thin-film sleeves designed to envelope and secure thin-film sample support windows for taut sample planes without trimming extraneous thin-film. Integrated flange on outer Cell neck diameter mechanically stops overextending Sleeve attachment for reproducible preparations and x-ray data. Cat. No. 1095 is supplied with a vented cap. Available in nominal 32, 39 and 43mm diameters.



**SERIES 1300: Double Open-Ended Sample Cups, Top Sample Filling, Re-Sealable External Overflow Reservoir**

#### What's New

Exhibitions  
Clinics and Workshops  
Suggested Reading Material  
Reference Standard Sources  
Data Bases  
XRF Instrument Manufacturer's Showcase

#### XRF Sample Cups and Accessories

Technical Data  
How to Select a Sample Cup  
Quick Reference Chart  
Accessories for Sample Cups  
Grinding Machines and Accessories  
Briquetting Presses and Accessories  
Grinding/Briquetting Additives  
Fusion Machines and Accessories  
Petrochemical Oil Standards  
PE and PVC Polymer Compliance Standards  
Thin-Film Sample Supports  
Microporous Film  
RoHS European Council Directive 2002/95/EC  
Technical Reprints

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Double open-ends enable pre-attachment of thin-film sample support windows in advance. Re-sealable caps integrate External Overflow Reservoirs and the option to equalize pressure differentials through passageways extending from within the assembled sample cup to the sample chamber. Unique "Bead-to-Indent" geometry between Snap-On Ring and Cell Neck assures taut thin-film sample support window planes and leak-resistant seals. Snap-On Rings integrated with serrated edges are alternatively available for trimming extraneous thin-film close to the Cells. Available in nominal 32 and 40 mm diameters.



#### SERIES 1400: Single Open-Ended, ThermoPlastic™ Seal Venting, Internal Standard Mounting and Micro-Sample Attachment Provisions



Single open-ended Cells have double puncturable ThermoPlastic™ Seals for equalizing pressure differentials. Unique "Bead-to-Indent" geometry between Snap-On Ring and Cell Neck assures taut thin-film sample support window planes and leak-resistant seals. Provided Collars are optionally used for pre-attaching a thin-film substrate to support evaporate droplets or small quantities of powdered sample materials in preparation for attaching another thin-film window material with a Snap-On Ring for containment and as a protective cover. Provision for accepting internal standards or micro-samples mounted in capillaries or to the ends of solid rods. Snap-On Rings designed with serrated edges are alternatively available for trimming extraneous thin-film close to the Cells. Available in nominal 32 and 40 mm diameters.



#### SERIES 1500: Double Open-Ended Sample Cups, Top Sample Filling and Microporous Film Attachment Provision



Double open-ended Cells enable top sample filling in advance by pre-attachment of thin-film sample support windows with one of two supplied Snap-On Rings. The second Snap-On Ring is used for attaching optionally available Microporous Film to the top end of the Cell. Optionally available Vented Sample Cup Caps are also used on the top open end for differential pressure equalizing. Unique "Bead-to-Indent" geometry between Snap-On Ring and Cell Neck assures taut thin-film sample support window planes and Microporous Film attachment with leak-resistant seals. Snap-On Rings designed with serrated edges are alternatively available for trimming extraneous thin-film close to the Cells. Available in nominal 32 and 40 mm diameters.



#### SERIES 1600: Slit-Vented Sample Cup Caps for 1500 Series Sample Cups



Slit-Vented Sample Cup Caps are used in conjunction with Series 1500 Sample Cups for differential pressure equalization. The interior of the slit-vented Caps integrate a series of concentric ridges that form physical barriers when attached to the Cell Necks of 1500 Series Sample Cups. The space in between the barriers serves to provide a tortuous passageway from within the sample cup and sample chamber to maintain equal pressures and avert distension or convolution of the thin-film sample support window under positive or negative pressure conditions. Available in nominal 32 and 40 mm diameters.



#### SERIES 1700: Single Open-Ended Sample Cups, Snap-Post Venting and External Overflow Reservoirs



Venting is performed by jiggling an integrated post attached to a ThermoPlastic™ Seal to rupture the seal within the External Overflow Reservoir base. Utilizing the "Bead-to-Indent" geometry of Snap-On





Ring to Cell Necks, the Series 1700 Sample Cups provide leak-resistant seals when assembled with thin-film sample support windows. Use provided Collars to deposit micro samples on thin-film substrates and the Snap-On Rings to secure them in position. Alternate Snap-On Rings with serrated cutting edges are available for trimming extraneous thin-film windows close to the Cells. Available in nominal 32 and 40 mm diameters.



#### SERIES 1800: Single Open-Ended Sample Cups, External Overflow Reservoir and ThermoPlastic™ Seal Venting Provision



Exterior Overflow Reservoir is integrated with a puncturable ThermoPlastic™ Seal for establishing equalization of pressure within the sample cup and sample chamber. Unique "Bead-to-Indent" geometry between Snap-On Ring and Cell Neck assures taut thin-film sample support window planes and leak-resistant seals. Use provided Collars to deposit micro samples on thin-film substrates and the Snap-On Rings to secure them in position. Alternate Snap-On Rings with serrated cutting edges are available for trimming extraneous thin-film windows close to the Cells. Available in nominal 32 and 40 mm diameters



#### SERIES 1850: Shallow Single Open-Ended SpectroSulfur™ Analyzer Cups with External Overflow Reservoir and ThermoPlastic™ Seal Venting Provision. Useable with XOS "Sindie®" Systems and other Sulfur Analyzers



This Series is designed for instruments requiring an overall height shallower than conventional sample cups and a wide upper section integrating an External Overflow Reservoir and a puncturable ThermoPlastic™ Seal for stabilizing pressure differentials. Unique "Bead-to-Indent" geometry between Snap-On Ring and Cell Neck assures taut thin-film sample support window planes and leak-resistant seals. Available in nominal 43 mm diameter.



#### SERIES 1900: Double Open-Ended Sample Cups with Top Sample Filling



Double open-ends enable pre-attachment of thin-film sample support windows in advance and top sample filling for applications in helium or air. "Bead-to-Indent" geometry between Snap-On Ring and Cell Neck assures taut thin-film sample support window planes and leak-resistant seals. Use provided Collars to deposit micro samples on thin-film substrates and the Snap-On Rings to secure them in position. Alternate Snap-On Rings with serrated cutting edges are available for trimming extraneous thin-film windows close to the Cells. Available in nominal 32 and 40 mm diameters.



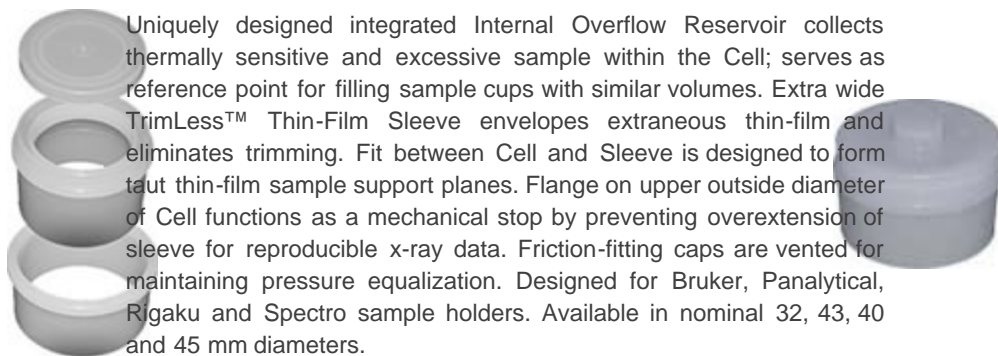
#### SERIES 1935-OX: Double Open-Ended Sample Cups and Vented Cap Replacements for Oxford Analyzers



Designed specifically as replacement cups and vented caps for Oxford analyzers requiring the user supplied L240 aluminum sample holders with interior "O" ring seals. Integrated upper flange functions as a mechanical stop by preventing overextending insertion into the aluminum sample holder ensuring reproducible x-ray data. Close tolerance fit ensures easy insertion and particularly removal in preparation for introducing another sample. Available in 31.2 mm diameter size.

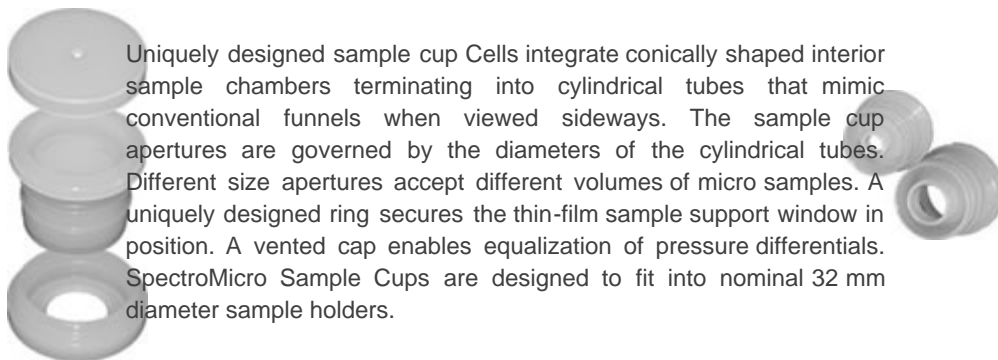


#### SERIES 2100: Double Open-Ended, TrimLess™ Thin-Film Sleeve Attachment, Internal Overflow Reservoir, Top Sample Filling and Vented Cap



Uniquely designed integrated Internal Overflow Reservoir collects thermally sensitive and excessive sample within the Cell; serves as reference point for filling sample cups with similar volumes. Extra wide TrimLess™ Thin-Film Sleeve envelopes extraneous thin-film and eliminates trimming. Fit between Cell and Sleeve is designed to form taut thin-film sample support planes. Flange on upper outside diameter of Cell functions as a mechanical stop by preventing overextension of sleeve for reproducible x-ray data. Friction-fitting caps are vented for maintaining pressure equalization. Designed for Bruker, Panalytical, Rigaku and Spectro sample holders. Available in nominal 32, 43, 40 and 45 mm diameters.

#### SERIES 3100: SpectroMicro® Sample Cups Utilize "Funnel Shape™" Technology



Uniquely designed sample cup Cells integrate conically shaped interior sample chambers terminating into cylindrical tubes that mimic conventional funnels when viewed sideways. The sample cup apertures are governed by the diameters of the cylindrical tubes. Different size apertures accept different volumes of micro samples. A uniquely designed ring secures the thin-film sample support window in position. A vented cap enables equalization of pressure differentials. SpectroMicro Sample Cups are designed to fit into nominal 32 mm diameter sample holders.

#### Gateway to Palm-Held Snap-On Ring, Sleeve and Thin-Film Fastener

This handy device is small enough to fit into a palm hand and takes the soreness out when assembling XRF sample cups with Snap-On Rings or Sleeves.



Cleverly designed with a series of counter-bores, it can accommodate the majority of sample cup diameters and configurations.

Simply align the Palm-Held Fastener over the Snap-On Ring or Sleeve and gently push down. During this process, the thin-film sample support window remains stretched over the sample cup Cell and upon assembly completion it's firmly secured for a taut thin-film sample plane.

#### Gateway to Snap-On Ring and Thin-Film Fastener



XRF Sample Cups designed with a "Bead-to-Indent" geometry for affixing thin-film windows to the Cells with Snap-On Rings are greatly facilitated by using the Snap-On Ring Fastener. By applying a slight amount of pressure to the finger lever the Snap-On Ring is slowly and uniformly attached to the Cell. During the process assembly process the thin-film substance maintains its tautness to form a perfect sample cup presentation effortlessly.

#### Gateway to Palm Held Vent-Hole Punch

XRF Sample Cups requiring venting for differential pressure equalization, the Vent-Hole Punch is an invaluable palm held tool.

Through a series of counter-bores, the Vent-Hole Punch will accommodate the majority of sample cups integrating a