



LC & LC/MS Chrom Verified



The First Step towards Better Data

Glass and Polypropylene (PP) Vial Kits





LC & LC/MS Chrom Verified



MAC-MOD LC & LC/MS Chrom Verified Glass and Polypropylene (PP) Vial Kits



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Why choose MAC-MOD Chrom Verified LC and LC/MS Vials?

OUR vials:

- Proprietary glass manufacturing processes provide three levels of inertness for vial surfaces to choose from:
 - **XISMS** (Extreme Inert Surface for MS)
 - **XISD** (Extra Inert Surface with Deactivation)
 - **SIS** (Standard Inert Surface)
- Proprietary manufacturing processes of polypropylene vials provide three different chemical internal surfaces:
 - **XBS** (Extreme Bio-Inert Surface)
 - **XBSHIB** (Extreme Bio-Inert Surface with Hydrophilic later)
 - **XPS** (Extreme PFAS-Inert Surface)
- Standard Recovery, Maximum Recovery, Total Recovery, and QSert Volumes are readily available
- Dimensions are tightly controlled to deliver consistent fill amounts to maintain surface-to-volume of vial ratio
- All caps provided in the kits have been tested to match the vial provided
- Every vial is **manufactured in the USA**



The *Other Guys'* vials:

- Glass surfaces can have active **silanol** groups which can interact with your sample
- Dimensions can vary across vial production lots
- Polypropylene monomers may cause contamination from low quality bulk resins which may cause interaction or sample loss with delicate BIO or PFAS samples
- pH shifts are common in their glass vials due to excess Na⁺ ions in borosilicate glass
- Basic compounds can **adsorb** on active glass surface





Glass Surfaces

OVERVIEW

Inertness

Surface Treatment

Recommended
Detector Type



XISMS Extreme Inert Surface

- Extreme Inert Surface modification intended for LC/MS analysis
- Creates Na⁺ reduced surface environment
- Excellent performance with low concentration samples
- XISMS stabilizes pH, and lowers adsorption of basic compounds
- Ideal for the following applications
 - Trace level analysis
 - Basic compound analysis
 - Peptide maps and peptide separations

LC/MS

XISD Extra Inert Surface with Deactivation

- Extra Inert Surface with silanization that modifies glass surface to be deactivated
- Silanization modifies glass surface by molecularly bonding to existing active sites

UHPLC/
UV

SIS Standard Inert Surface

- Heat treated to create a very clean robust glass surface for non-adsorptive analyte sets
- Surface may still have residual silanol groups from heat treated glass, so best suited for higher concentration samples

HPLC/
UV



Polypropylene (PP) Surfaces

OVERVIEW

Surface Type

Surface

Application Types



Hydrophobic Surface

XBS

Extreme Bio-inert Surface for Hydrophilic Compounds

Polypropylene surface is hydrophobic

- Lipids
- Steroids
- Hydrophobic polypeptides
- Hydrophilic proteins (mabs, ADCs, etc.)



Hydrophilic Surface

XBS with HIB

Extreme Bio-inert Surface for Hydrophobic Compounds

Polypropylene surface is hydrophilic due to plasma treatment grafting hydrophilic chemical groups

- Nucleic acids (DNA/RNA)
- Polysaccharides
- Water-soluble enzymes or antibodies



Minimized fluorinated compound surface

XPS

Extreme Inert Surface for PFAS and PFOA Analysis

Base monomer has reduced fluorinated components

- PFAS and PFOA

Choose the correct vial surface by analyte type to the correct surface technology and detector type

Detector Type:

LC/MS: Triple Quad & HRMS

Analyte Type	Surface Technology
Small Molecules (Acids/Neutrals)	XISMS
Small Molecule (Bases)	XISMS
Pesticides/Herbicides/Insecticides	XISMS
PFAS/PFOA	XPS
Peptides Digests & Synthetic Peptides	XISMS or XBSHIB
Mabs/ADCs/Large Proteins	XBS or XBSHIB

Detector Type:

UHPLC/HPLC: LC/UV, ELSD, CAD, RI, Fluorescence

Analyte Type	Surface Technology
Small Molecules (Acids/Neutrals)	SIS
Small Molecule (Bases)	XISD
Peptides Digests & Synthetic Peptides	XISD or XBSHIB
Mabs/ADCs/Large Proteins	XBSHIB

XISMS LC/MS

Extreme Inert Surface Technology

Glass Vials



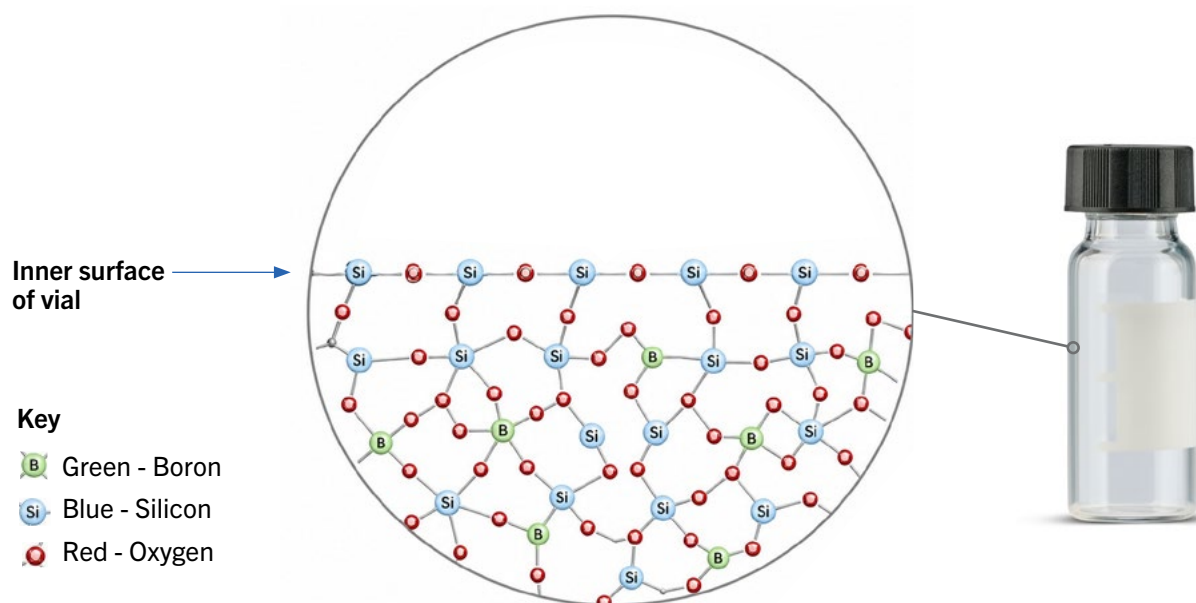
MAC-MOD Chrom Verified Vial Technology

LC/MS Vials

XISMS

Extreme Inert Surface for LC/MS applications

- Multi-step temperature treatment to eliminate silanolic activity
- Removes Na^+ from vial surface which limits Na^+ adducts from LC/MS Spectrum
- Reduces pH shifts
- Cap does not include a bonding ring to minimize contamination for sensitive MS applications



Surface Treatment	Reduction in pH Shift (Low-High)	Limits Na^+ Adduct Formation (Low-High)	Technique	Analyte Type
XIMS	High	High	LC/MS	• Small Molecules (Acids/Bases/Neutrals) • Peptides • Large Molecules

MAC-MOD Chrom Verified Vial Technology

LC/MS Vials

XISMS LC/MS:

2.0 mL Volume

Standard Recovery Vials



Size: 12 x 32 mm (width x length)
Surface: XISMS – Extreme Inert Surface Technology
Finish Type: Screw Thread Finish
Sold in: 100 vials & caps/kit
Minimum Order: 10 kits

All Vials include Write-On Patch

Part Numbers

MAC-MOD Part #	Type of Material	Pre-Slit or Non-Slit	Type of Cap
MV6014LSXISM	Clear Glass	Non-Slit	Black
MV6015LSXISM	Amber Glass	Non-Slit	Black
MV6016LSXISM	Clear Glass	Pre-Slit	Black
MV6017LSXISM	Amber Glass	Pre-Slit	Black

MAC-MOD Chrom Verified Vial Technology

LC/MS Vials

XISMS LC/MS:

1.5 mL Volume

Maximum Recovery Vials



Size: 12 x 32 mm (width x length)
Surface: XISMS – Extreme Inert Surface Technology
Finish Type: Screw Thread Finish
Sold in: 100 vials & caps/kit
Minimum Order: 10 kits

Write-On Patch NOT included

Part Numbers

MAC-MOD Part #	Type of Material	Pre-Slit or Non-Slit	Type of Cap
MV2006LSXISM RM	Clear Glass	Non-Slit	Black
MV2009LSXISM RM	Amber Glass	Non-Slit	Black
MV2216LSXISM RM	Clear Glass	Pre-Slit	Black
MV2218LSXISM RM	Amber Glass	Pre-Slit	Black

MAC-MOD Chrom Verified Vial Technology

LC/MS Vials

XISMS LC/MS:

1.0 mL Volume

Total Recovery Vials



Size: 12 x 32 mm (width x length)
Surface: XISMS – Extreme Inert Surface Technology
Finish Type: Screw Thread Finish
Sold in: 100 vials & caps/kit
Minimum Order: 10 kits

Write-On Patch NOT included

Part Numbers

MAC-MOD Part #	Type of Material	Pre-Slit or Non-Slit	Type of Cap
MV2382LSXISTRM	Clear Glass	Non-Slit	Black
MV2384LSXISTRM	Clear Glass	Pre-Slit	Black

XISD UHPLC

**Improved Inert Surface
with Deactivation**

Glass Vials



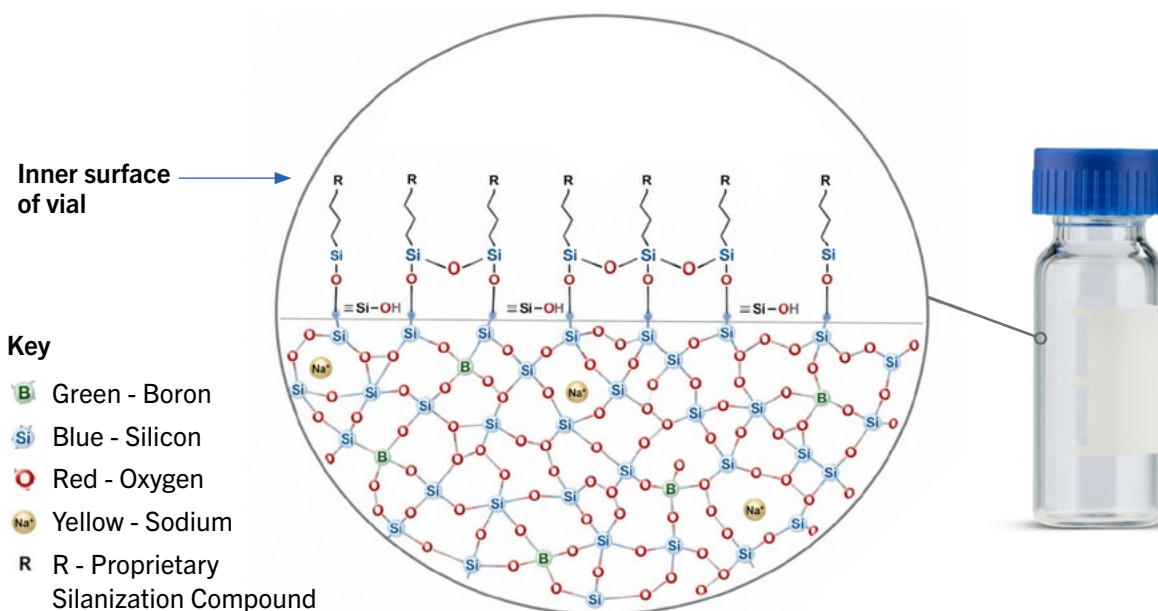
MAC-MOD Chrom Verified Vial Technology

UHPLC Vials

XISD

Improved Inert Surface with Deactivation

- Deactivation of vials by applying silanization technology to internal glass surface
- Inert molecularly bonded surface modification reduces reactive silanol groups on internal glass surface
- Reduces pH shift from glass surface adsorption



Surface Treatment	Reduction in pH Shift (Low-High)	Limits Na ⁺ Adduct Formation (Low-High)	Technique	Analyte Type
XIS with Deactivation	Medium to High	High	UHPLC	• Small molecules (acids, bases, neutrals) • Synthetic peptide separations • Large molecule separations for LC/UV

MAC-MOD Chrom Verified Vial Technology

UHPLC Vials

XISD LC:

2.0 mL Volume

Standard Recovery Vials



Size: 12 x 32 mm (width x length)
Surface: XIS (Extra-Inert Surface) with Deactivation
Finish Type: Screw Thread Finish
Sold in: 100 vials & caps/kit
Minimum Order: 10 kits

All Vials include Write-On Patch

Part Numbers

MAC-MOD Part #	Type of Material	Pre-Slit or Non-Slit	Type of Cap
MV6014DAXISD	Clear Glass	Non-Slit	Blue
MV6015DAXISD	Amber Glass	Non-Slit	Blue
MV6016DAXISD	Clear Glass	Pre-Slit	Blue
MV6017DAXISD	Amber Glass	Pre-Slit	Blue

MAC-MOD Chrom Verified Vial Technology

UHPLC Vials

XISD LC:

1.5 mL Volume

Maximum Recovery Vials



Size: 12 x 32 mm (width x length)
Surface: XIS (Extra-Inert Surface) with Deactivation
Finish Type: Screw Thread Finish
Sold in: 100 vials & caps/kit
Minimum Order: 10 kits

Write-On Patch NOT included

Part Numbers

MAC-MOD Part #	Type of Material	Pre-Slit or Non-Slit	Type of Cap
MV2006DAXISMRD	Clear glass	Non-Slit	Blue
MV2216DAXISMRD	Amber Glass	Non-Slit	Blue
MV2009DAXISMRD	Clear Glass	Pre-Slit	Blue
MV2218DAXISMRD	Amber Glass	Pre-Slit	Blue

MAC-MOD Chrom Verified Vial Technology

UHPLC Vials

XISD LC:

1.0 mL Volume

Total Recovery Vials



Size: 12 x 32 mm (width x length)
Surface: XIS (Extra-Inert Surface) with Deactivation
Finish Type: Screw Thread Finish
Sold in: 100 vials & caps/kit
Minimum Order: 10 kits

Write-On Patch NOT included

Part Numbers

MAC-MOD Part #	Type of Material	Pre-Slit or Non-Slit	Type of Cap
MV2382DAXISTRD	Clear Glass	Non-Slit	Blue
MV2384DAXISTRD	Clear Glass	Pre-Slit	Blue

SIS HPLC

**Standard Inert Surface
Workhorse Vials**

HPLC Vials



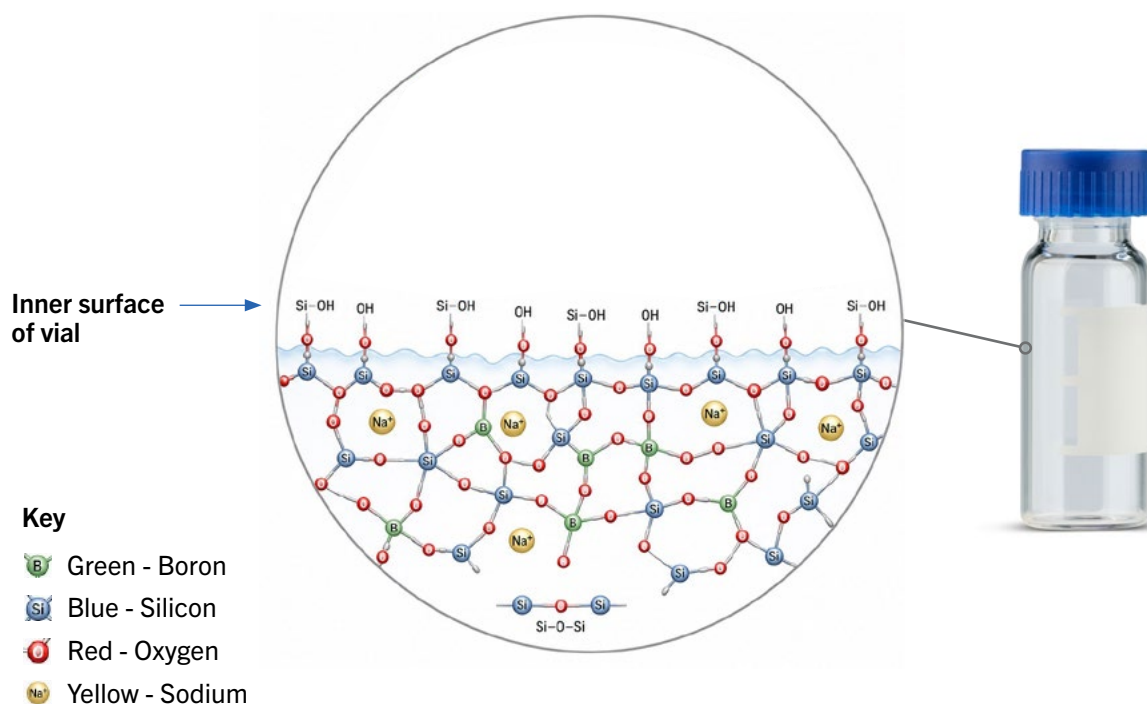
MAC-MOD Chrom Verified Vial Technology

HPLC Vials

SIS

Standard Inert Surface

- Workhorse vial
- High temperature heat treated surface
- Inert surface vial for routine analysis



Surface Treatment	Reduction in pH Shift (Low–High)	Limits Na ⁺ Adduct Formation (Low–High)	Technique	Analyte Type
SIS	Medium	Medium	HPLC	Acids and Neutrals

MAC-MOD Chrom Verified Vial Technology

HPLC Vials

SIS LC

2.0 mL Volume Standard Recovery Vials



Size: 12 x 32 mm (width x length)
Surface: **SIS: Standard Inert Surface**
Finish Type: **Screw Thread Finish**
Sold in: **100 vials & caps/kit**
Minimum Order: **10 kits**

All Vials include Write-On Patch

Part Numbers

MAC-MOD Part #	Type of Material	Pre-Slit or Non-Slit	Type of Cap
MV6014SIS	Clear Glass	Non-Slit	Blue
MV6015SIS	Amber Glass	Non-Slit	Blue
MV6016SIS	Clear Glass	Pre-Slit	Blue
MV6017SIS	Amber Glass	Pre-Slit	Blue

MAC-MOD Chrom Verified Vial Technology

HPLC Vials

SIS LC:

1.5 mL Volume

Maximum Recovery Vials



Size: 12 x 32 mm (width x length)

Surface: **SIS: Standard Inert Surface**

Finish Type: **Screw Thread Finish**

Sold in: **100 vials & caps/kit**

Minimum Order: **10 kits**

Write-On Patch NOT included

Part Numbers

MAC-MOD Part #	Type of Material	Pre-Slit or Non-Slit	Type of Cap
MV2006SISMR	Clear Glass	Non-Slit	Blue
MV2216SISMR	Amber Glass	Non-Slit	Blue
MV2009SISMR	Clear Glass	Pre-Slit	Blue
MV2218SISMR	Amber Glass	Pre-Slit	Blue

MAC-MOD Chrom Verified Vial Technology

HPLC Vials

SIS LC:

1.0 mL Volume
Total Recovery



Size: 12 x 32 mm (width x length)
Surface: **SIS: Standard Inert Surface**
Finish Type: **Screw Thread Finish**
Sold in: **100 vials & caps/kit**
Minimum Order: **10 kits**

Write-On Patch NOT included

Part Numbers

MAC-MOD Part #	Type of Material	Pre-Slit or Non-Slit	Type of Cap
MV2382SISTR	Clear Glass	Non-Slit	Blue
MV2384SISTR	Clear Glass	Pre-Slit	Blue

MAC-MOD Chrom Verified Vial Technology

HPLC Vials

SIS LC:

300 μ L Volume Qsert Fused Insert Vials



Size: 12 x 32 mm (width x length)
Surface: **SIS: Standard Inert Surface**
Finish Type: **Screw Thread Finish**
Sold in: **100 vials & caps/kit**
Minimum Order: **10 kits**

All Vials include Write-On Patch

Part Numbers

MAC-MOD Part #	Type of Material	Pre-Slit or Non-Slit	Type of Cap
MV2024SISFI	Clear Glass	Non-Slit	Blue
MV2036SISFI	Amber Glass	Non-Slit	Blue
MV2042SISFI	Clear Glass	Pre-Slit	Blue
MV2044SISFI	Amber Glass	Pre-Slit	Blue

XBS

**Extreme Plasma Induced
Bio-Inert Surface - Hydrophobic**

Polypropylene Vials



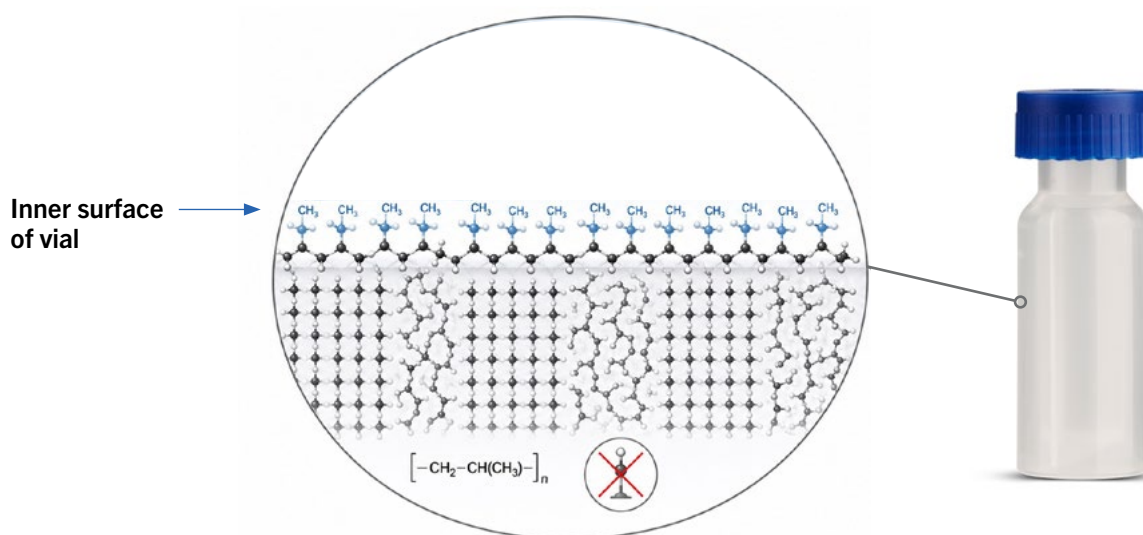
MAC-MOD Chrom Verified Vial Technology

Polypropylene Vials

XBS

Extreme Plasma Induced Bio-Inert Surface

Tightly controlled injection molded resin to ensure high-quality bio-inert surface



Surface Treatment	Reduction in pH Shift (Low–High)	Limits Na ⁺ Adduct Formation (Low–High)	Technique	Analyte Type
XBS	High	High	LC/MS & UHPLC	Hydrophilic compounds (i.e nucleic acids (DNA/RNA), polysaccharides, water-soluble enzymes or antibodies)

MAC-MOD Chrom Verified Vial Technology

Polypropylene Vials

XBS

750 µL Volume



Size: 12 x 32 mm (width x length)
Surface: XBS – Extreme Plasma Induced Bio-Inert Surface Technology
Finish Type: Screw Thread Finish
Sold in: 100 vials & caps/kit
Minimum Order: 50 kits

Part Numbers

MAC-MOD Part #	Type of Material	Pre-Slit or Non-Slit	Type of Cap
MV6060XBS	Polypropylene	Non-Slit	Blue
MV6062XBS	Polypropylene	Pre-Slit	Blue

MAC-MOD Chrom Verified Vial Technology

Polypropylene Vials

XBS

300 µL Volume



Size: 12 x 32 mm (width x length)
Surface: XBS – Extreme Plasma Induced Bio-Inert Surface Technology
Finish Type: Screw Thread Finish
Sold in: 100 vials & caps/kit
Minimum Order: 50 kits

Part Numbers

MAC-MOD Part #	Type of Material	Pre-Slit or Non-Slit	Type of Cap
MV6026XBS	Polypropylene	Non-Slit	Blue
MV6035XBS	Polypropylene	Pre-Slit	Blue

XBS with HIB

**Extreme Plasma Induced
Bio-Inert Surface
with Hydrophilic Inert Bonding**

Polypropylene Vials



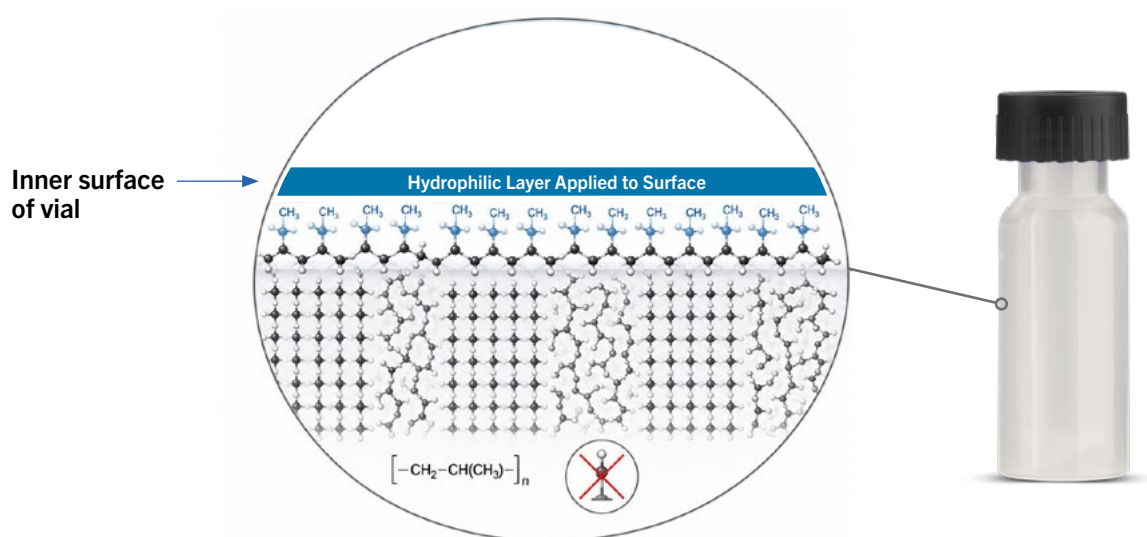
MAC-MOD Chrom Verified Vial Technology

Polypropylene Vials

XBS with HIB

Extreme Plasma Induced Bio-Inert Surface with Hydrophilic Inert Bonding

Minimizes hydrophobic binding to plastic surfaces



Surface Treatment	Reduction in pH Shift (Low–High)	Limits Na ⁺ Adduct Formation (Low–High)	Technique	Analyte Type
XBS with HIB	High	High	LC/MS & UHPLC	Hydrophobic compounds (i.e lipids, steroids, hydrophobic polypeptides/proteins, polymers)

MAC-MOD Chrom Verified Vial Technology

Polypropylene Vials

XBS with HIB

750 µL Volume



Size:	12 x 32 mm (width x length)
Surface:	XBS – Extreme Plasma Induced Bio-Inert Surface Technology with Hydrophilic modification
Finish Type:	Screw Thread Finish
Sold in:	100 vials & caps/kit
Minimum Order:	50 kits

Part Numbers

MAC-MOD Part #	Type of Material	Pre-Slit or Non-Slit	Type of Cap
MV6125XBShIB	Polypropylene	Pre-Slit	Black

MAC-MOD Chrom Verified Vial Technology

Polypropylene Vials

XBS with HIB

300 µL Volume



Size:	12 x 32 mm (width x length)
Surface:	XBS – Extreme Plasma Induced Bio-Inert Surface Technology with Hydrophilic modification
Finish Type:	Screw Thread Finish
Sold in:	100 vials & caps/kit
Minimum Order:	50 kits

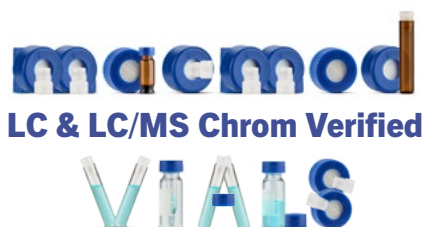
Part Numbers

MAC-MOD Part #	Type of Material	Pre-Slit or Non-Slit	Type of Cap
MV6124XBShIB	Polypropylene	Pre-Slit	Black

XPS

Extreme Plasma Induced PFAS-Inert Surface

Polypropylene Vials



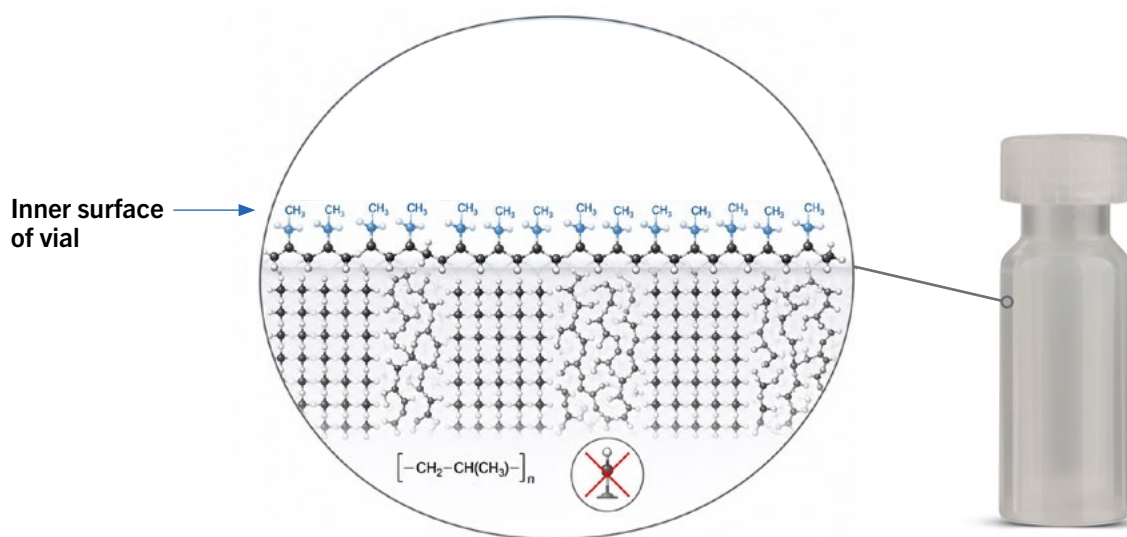
MAC-MOD Chrom Verified Vial Technology

Polypropylene Vials

XPS

Extreme Plasma Induced PFAS-Inert Surface

- Reduced fluorinated resin to limit fluorinated compounds interference with analysis
- Raw material limits fluorinated polymers therefore provides a PFAS-Inert vial for low abundance PFAS separations



Surface Treatment	PFAS Inert	Limits Adsorption of PFAS Compounds	Technique	Analyte Type
XPS	Yes	Yes	LC/MS	PFAS/PFOA containing compounds

MAC-MOD Chrom Verified Vial Technology

Polypropylene Vials

XPS

750 µL Volume



Size: 12 x 32 mm (width x length)
Surface: XPS – Extreme PFAS-Free Inert Surface
Finish Type: Screw Thread Finish
Sold in: 100 vials & caps/kit
Minimum Order: 50 kits

Part Numbers

MAC-MOD Part #	Type of Material	Septum Type	Type of Cap
MV4004XPS	Polypropylene	Septumless	Clear

MAC-MOD Chrom Verified Vial Technology

Polypropylene Vials

XPS

300 µL Volume



Size: 12 x 32 mm (width x length)
Surface: XPS – Extreme PFAS-Free Inert Surface
Finish Type: Screw Thread Finish
Sold in: 100 vials & caps/kit
Minimum Order: 50 kits

Part Numbers

MAC-MOD Part #	Type of Material	Septum Type	Type of Cap
MV4002XPS	Polypropylene	Septumless	Clear

MAC-MOD Vial Comparison Guides



Vial Comparison Guide

LC/MS Vials

MAC-MOD Vials	Waters	Agilent	ThermoFisher Scientific	Microsolv
XISMS, 2.0 mL, Standard Recovery, (Clear) Vial Kit	TruView™ pH Control LCMS Certified, 12 x 32 mm, 2.0 mL (Clear) Vial Kit	Agilent MS Analyzed Vials, 12 x 32 mm, 2.0 mL (Clear), Vial Only	SureSTART™ 2 mL Screw-thread Vials, Level 3 High Performance Applications (Clear) Vial Only	No Direct Alternative
XISMS, 2.0 mL, Standard Recovery, (Amber) Vial Kit	TruView™ pH Control LCMS Certified, 12 x 32 mm, 2.0 mL (Amber) Vial Kit	Agilent MS Analyzed Vials, 12 x 32 mm, 2.0 mL (Amber), Vial Only	SureSTART™ 2 mL Screw-thread Vials, (Amber) Level 3 High Performance Applications (Amber) Vial Only	No Direct Alternative
XISMS, 1.5 mL, Maximum Recovery, (Clear) Vial Kit	TruView™ pH Control LCMS Certified, 12 x 32 mm, Max Recovery, 1.5 mL (Clear) Vial Kit	No Direct Alternative	SureSTART™ 1.5 mL Screw-thread Vials, Level 3 High Performance Applications (Clear) Vial Only	No Direct Alternative
XISMS, 1.5 mL, Maximum Recovery, (Amber) Vial Kit	TruView™ pH Control LCMS Certified, 12 x 32 mm, Max Recovery, 1.5 mL (Amber) Vial Kit	No Direct Alternative	SureSTART™ 1.5 mL Screw-thread Vials, Level 3 High Performance Applications (Amber) Vial Only	No Direct Alternative
XISMS, 1.0 mL, Total Recovery, (Clear) Vial Kit	TruView™ pH Control LCMS Certified 12 x 32 mm, Total Recovery, 1.0 mL (Clear) Vial Kit	No Direct Alternative	SureSTART™ 1.0 mL Screw-thread Vials, Level 3 High Performance Applications (Clear) Vial Only	No Direct Alternative

Disclaimer: The above table is considered suggested equivalents for end-user ease.

SureSTART™ is a registered trademark of ThermoFisher Scientific.

TruView™ is a registered trademark of Waters Corporation.

Vial Comparison Guide

UHPLC Vials

MAC-MOD Vials	Waters	Agilent	ThermoFisher Scientific	Microsolv
XISD, 2.0 mL, Standard Recovery, (Clear) Vial Kit	Deactivated (Clear) Glass, 12 x 32 mm, 2.0 mL Vial Kit	Agilent Deactivated, 12 x 32 mm, 2.0 mL Vial Only (Clear)	SureSTART™ Level 3, 12 x 32 mm, 2.0 mL, Clear Vial (Silanized)	Microsolv Brand Deactivated, 12 x 32 mm, 2.0 mL (Clear) Vial Kit
XISD, 2.0 mL, Standard Recovery, (Amber) Vial Kit	Deactivated (Amber) Glass, 12 x 32 mm, 2.0 mL Vial Kit	Agilent Deactivated, 12 x 32 mm, 2.0 mL Vial Only (Amber)	SureSTART™ Level 3, 12 x 32 mm, 2.0 mL, Amber Vial (Silanized)	Microsolv Brand Deactivated, 12 x 32 mm, 2.0 mL (Amber) Vial Kit
XISD, 1.5 mL, Maximum Recovery, (Clear) Vial Kit	Deactivated (Clear) Glass, 12 x 32 mm, 1.5 mL Max Recovery Vial Kit	No Direct Alternative	No Direct Alternative	AQ™ Brand, 1.8 mL Maximum Recovery, 12 x 32 mm, (Clear) Vial Kit
XISD, 1.5 mL, Maximum Recovery, (Amber) Vial Kit	Deactivated (Amber) Glass, 12 x 32 mm, 1.5 mL Max Recovery Vial Kit	No Direct Alternative	No Direct Alternative	No Direct Alternative
XISD, 1.0 mL, Total Recovery, (Clear) Vial Kit	Deactivated (Clear) Glass, 12 x 32 mm, 1.0 mL Total Recovery Vial Kit	No Direct Alternative	No Direct Alternative	AQ™ Brand, 1.2 mL MRQ, 12 x 32 mm, (Clear) Vial Kit
XISD Qsert, 0.3 mL, (Clear) Vial Kit	Deactivated (Clear) Glass, 12 x 32 mm, Qsert Vial Kit	No Direct Alternative	No Direct Alternative	AQ™ Brand, 0.3 mL, 12 x 32 mm, (Clear) Vial Kit
XISD Qsert, 0.3 mL, (Amber) Vial Kit	Deactivated (Amber) Glass, 12 x 32 mm, Qsert Vial Kit	No Direct Alternative	No Direct Alternative	No Direct Alternative

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SureStart™ is a registered trademark of ThermoFisher Scientific.

AQ™ Brand is a registered trademark of Microsolv Corporation.

Vial Comparison Guide

HPLC Vials

MAC-MOD Vials	Waters	Agilent	ThermoFisher Scientific	Microsolv
SIS, 2.0 mL, Standard Recovery, (Clear) Vial Kit	LCGC Certified (Clear) Glass, 12 x 32 mm, 2.0 mL Vial Kit	Agilent LC Certified, 12 x 32 mm, 2.0 mL, (Clear)	SureSTART™ Level 2, 12 x 32 mm, 2.0 mL, Clear Vial	Microsolv Brand Deactivated, 12 x 32 mm, 2.0 mL (Clear)
SIS, 2.0 mL, Standard Recovery, (Amber) Vial Kit	LCGC Certified (Amber) Glass, 12 x 32 mm, 2.0 mL Vial Lot	Agilent LC.GC Certified, 12 x 32 mm, 2.0 mL(Amber)	SureSTART™ Level 2, 12 x 32 mm, 2.0 mL, Amber Vial	Microsolv Brand Deactivated, 12 x 32 mm, 2.0 mL (Amber)
SIS, 1.5 mL, Maximum Recovery, (Clear) Vial Kit	LCGC Certified (Clear) Glass, 12 x 32 mm, 1.5 mL Max Recovery Vial Kit	Vial, clear, high recovery, screw top, 1.5 mL, 30 µL reservoir, Vial Only	SureSTART™ <2 mL High Recovery Glass Screw Top (U) HPLC & GC Vials, Level 3	Microsolv RSA™ 1.5 mL, Maximum Recovery, (Clear) Vial Kit
SIS, 1.5 mL, Maximum Recovery, (Amber) Vial Kit	LCGC Certified (Amber) Glass, 12 x 32 mm, 1.5 mL Max Recovery Vial Kit	Vial, amber, high recovery, screw top, 1.5 mL, 30 µL reservoir, 100/kit Vial Only	No Direct Alternative	Microsolv RSA™ 1.5 mL, Maximum Recovery, (Amber) Vial Kit
SIS, 1.0 mL, Total Recovery, (Clear) Vial Kit	LCGC Certified (Clear) Glass, 12 x 32 mm, 1.0 mL Total Recovery Vial Kit	No Direct Alternative	SureSTART™ Total Recovery Glass Screw Top Microvials for <2 mL Samples, Level 3 High Performance Applications	Microsolv RSA™ 1.0 mL, MRQ, (Clear) Vial Kit
SIS Qsert, 0.3 mL, (Clear) Vial Kit	LCGC Certified (Clear) Glass, 12 x 32 mm, Qsert Vial Kit	No Direct Alternative	No Direct Alternative	Microsolv RSA™ 1.0 mL, (Clear) Vial Kit
SIS Qsert, 0.3 mL, (Amber) Vial Kit	LCGC Certified (Amber) Glass, 12 x 32 mm, Qsert Vial Kit	No Direct Alternative	No Direct Alternative	Microsolv RSA™ 0.3 mL, (Amber) Vial Kit

Disclaimer: The above table is considered suggested equivalents for end-user ease.

SureStart™ is a registered trademark of ThermoFisher Scientific.

RSA™ Brand is a registered trademark of Microsolv Corporation.

Vial Comparison Guide

Bio-Inert Polypropylene LC/MS Vials

MAC-MOD Vials	Waters	Agilent	ThermoFisher Scientific	Microsolv
750 µl, XBS, Bio-Inert Polypropylene Vial	Polypropylene, 12 x 32 mm, 750 µL Vial	No Direct Alternative	SureSTART™ 0.8mL Snap-Cap alternative	700 µl, Microsolv Bio-Inert Polypropylene Vial
300 µl, XBS, Bio-Inert Polypropylene Vial	Polypropylene, 12 x 32 mm, 250 µL Vial	No Direct Alternative	SureSTART™ Gold-Grade 0.4 mL Polypropylene Microvials	300 µl, Microsolv, Bio-Inert Polypropylene Vial
750 µl, XBS with HIB, Bio-Inert Polypropylene Vial	QuanRecovery™ with MaxPeak, 12 x 32 mm, 700 µL Vial	No Direct Alternative	No Direct Alternative	No Direct Alternative
300 µl, XBS with HIB, Bio-Inert Polypropylene Vial	QuanRecovery™ with MaxPeak HPS, 12 x 32 mm, 300 µL Vial	No Direct Alternative	No Direct Alternative	No Direct Alternative

Disclaimer: The above table is considered suggested equivalents for end-user ease.

SureStart™ is a registered trademark of ThermoFisher Scientific.

QuanRecovery™ is a registered Trademark of Waters Corporation.

MAC-MOD Vials Part Number & Description Tables



MAC-MOD Chrom Verified Vials

Part Number Table

LC/MS Standard Recovery Vials with XISMS Surface Technology

2.0 mL Volume

Clear Glass



Part Number	Pre-Slit or Non-Slit	Description
MV6014LSXISM	Non-Slit	MAC-MOD Chrom Verified XISMS LC/MS Vial Kit, 12 x 32 mm, 2.0 mL Volume, Clear Glass, Screw Neck Finish, with MS Non-Bonded Black Cap and Non-Slit PTFE/Silicone Septum included with Write-On Patch, 100/kit
MV6016LSXISM	Pre-Slit	MAC-MOD Chrom Verified XISMS LC/MS Vial Kit, 12 x 32 mm, 2.0 mL Volume, Clear Glass, Screw Neck Finish, with MS Non-Bonded Black Cap and Pre-Slit PTFE/Silicone Septum included with Write-On Patch, 100/kit

Amber Glass



Part Number	Pre-Slit or Non-Slit	Description
MV6015LSXISM	Non-Slit	MAC-MOD Chrom Verified XISMS LC/MS Vial Kit, 12 x 32 mm, 2.0 mL Volume, Amber Glass, Screw Neck Finish, with MS Non-Bonded Black Cap and Non-Slit PTFE/Silicone Septum included with Write-On Patch, 100/kit
MV6017LSXISM	Pre-Slit	MAC-MOD Chrom Verified XISMS LC/MS Vial Kit, 12 x 32 mm, 2.0 mL Volume, Amber Glass, Screw Neck Finish, with MS Non-Bonded Black Cap and Pre-Slit PTFE/Silicone Septum included with Write-On Patch, 100/kit

MAC-MOD Chrom Verified Vials Part Number Table

LC/MS Maximum Recovery Vials with XISMS Surface Technology

1.5 mL Volume

Clear Glass



Part Number	Pre-Slit or Non-Slit	Description
MV2006LSXISMRM	Non-Slit	MAC-MOD Chrom Verified XISMS LC/MS Maximum Recovery Vial Kit, 12 x 32 mm, 1.5 mL Volume, Clear Glass, Screw Neck Finish, with MS Non-Bonded Black Cap and Non-Slit PTFE/Silicone Septum does not include Write-On Patch, 100/kit
MV2216LSXISMRM	Pre-Slit	MAC-MOD Chrom Verified XISMS LC/MS Maximum Recovery Vial Kit, 12 x 32 mm, 1.5 mL Volume, Clear Glass, Screw Neck Finish, with MS Non-Bonded Black Cap and Pre-Slit PTFE/Silicone Septum does not include Write-On Patch, 100/kit

Amber Glass



Part Number	Pre-Slit or Non-Slit	Description
MV2009LSXISMRM	Non-Slit	MAC-MOD Chrom Verified XISMS LC/MS Maximum Recovery Vial Kit, 12 x 32 mm, 1.5 mL Volume, Amber Glass, Screw Neck Finish, with MS Non-Bonded Black Cap and Non-Slit PTFE/Silicone Septum does not include Write-On Patch, 100/kit
MV2218LSXISMRM	Pre-Slit	MAC-MOD Chrom Verified XISMS LC/MS Maximum Recovery Vial Kit, 12 x 32 mm, 1.5 mL Volume, Amber Glass, Screw Neck Finish, with MS Non-Bonded Black Cap and Pre-Slit PTFE/Silicone Septum does not include Write-On Patch, 100/kit

LC/MS Total Recovery Vials with XISMS Surface Technology

1.0 mL Volume

Clear Glass



Part Number	Pre-Slit or Non-Slit	Description
MV2382LSXISTRM	Non-Slit	MAC-MOD Chrom Verified XISMS LC/MS Total Recovery Vial Kit, 12 x 32 mm, 1.0 mL Volume, Clear Glass, Screw Neck Finish, with MS Non-Bonded Black Cap and Non-Slit PTFE/Silicone Septum included does not include Write-On Patch, 100/kit
MV2384LSXISTRM	Pre-Slit	MAC-MOD Chrom Verified XISMS LC/MS Total Recovery Vial Kit, 12 x 32 mm, 1.0 mL Volume, Clear Glass, Screw Neck Finish, with MS Non-Bonded Black Cap and Pre-Slit PTFE/Silicone Septum does not include Write-On Patch, 100/kit

UHPLC Deactivated Standard Recovery Vials with XISD Surface Technology

2.0 mL Volume

Clear Glass



Part Number	Pre-Slit or Non-Slit	Description
MV6014DAXISD	Non-Slit	MAC-MOD Chrom Verified XISD Deactivated LC Vial Kit, 12 x 32 mm, 2.0 mL Volume, Clear Glass, Screw Neck Finish, with Bonded Blue Cap and Non-Slit PTFE/Silicone Septum included with Write-On Patch, 100/kit
MV6016DAXISD	Pre-Slit	MAC-MOD Chrom Verified XISD Deactivated LC Vial Kit, 12 x 32 mm, 2.0 mL Volume, Clear Glass, Screw Neck Finish, with Bonded Blue Cap and Pre-Slit PTFE/Silicone Septum included with Write-On Patch, 100/kit

Amber Glass



Part Number	Pre-Slit or Non-Slit	Description
MV6015DAXISD	Non-Slit	MAC-MOD Chrom Verified XISD Deactivated LC Vial Kit, 12 x 32 mm, 2.0 mL Volume, Amber Glass, Screw Neck Finish, with Bonded Blue Cap and Non-Slit PTFE/Silicone Septum included with Write-On Patch, 100/kit
MV6017DAXISD	Pre-Slit	MAC-MOD Chrom Verified XISD Deactivated LC Vial Kit, 12 x 32 mm, 2.0 mL Volume, Amber Glass, Screw Neck Finish, with Bonded Blue Cap and Pre-Slit PTFE/Silicone Septum included with Write-On Patch, 100/kit

MAC-MOD Chrom Verified Vials

Part Number Table

UHPLC Deactivated Maximum Recovery Vials with XISD Surface Technology

1.5 mL Volume

Clear Glass



Part Number	Pre-Slit or Non-Slit	Description
MV2006DAXISMRD	Non-Slit	MAC-MOD Chrom Verified XISD Deactivated LC Maximum Recovery Vial Kit, 12 x 32 mm, 1.5 mL Volume, Clear Glass, Screw Neck Finish, with Bonded Blue Cap and Non-Slit PTFE/Silicone Septum does not include Write-On Patch, 100/kit
MV2009DAXISMRD	Pre-Slit	MAC-MOD Chrom Verified XISD Deactivated Maximum Recovery LC Vial Kit, 12 x 32 mm, 1.5 mL Volume, Clear Glass, Screw Neck Finish, with Bonded Blue Cap and Pre-Slit PTFE/Silicone Septum does not include Write-On Patch, 100/kit

Amber Glass



Part Number	Pre-Slit or Non-Slit	Description
MV2216DAXISMRD	Non-Slit	MAC-MOD Chrom Verified XISD Deactivated Maximum Recovery LC Vial Kit, 12 x 32 mm, 1.5 mL Volume, Amber Glass, Screw Neck Finish, with Bonded Blue Cap and Non-Slit PTFE/Silicone Septum does not include Write-On Patch, 100/kit
MV2218DAXISMRD	Pre-Slit	MAC-MOD Chrom Verified XISD Deactivated Maximum Recovery LC Vial Kit, 12 x 32 mm, 1.5 mL Volume, Amber Glass, Screw Neck Finish, with Bonded Blue Cap and Pre-Slit PTFE/Silicone Septum does not include Write-On Patch, 100/kit

UHPLC Deactivated Total Recovery Vials with XISD Surface Technology

1.0 mL Volume

Clear Glass



Part Number	Pre-Slit or Non-Slit	Description
MV2382DAXISTRD	Non-Slit	MAC-MOD Chrom Verified XISD Deactivated LC Total Recovery Vial Kit, 12 x 32 mm, 1.0 mL Volume, Clear Glass, Screw Neck Finish, with Bonded Blue Cap and Non-Slit PTFE/Silicone Septum does not include Write-On Patch, 100/kit
MV2384DAXISTRD	Pre-Slit	MAC-MOD Chrom Verified XISD Deactivated LC Total Recovery Vial Kit, 12 x 32 mm, 1.0 mL Volume, Clear Glass, Screw Neck Finish, with Bonded Blue Cap and Pre-Slit PTFE/Silicone Septum does not include Write-On Patch, 100/kit

MAC-MOD Chrom Verified Vials

Part Number Table

HPLC Standard Recovery Vials with SIS Surface Technology

2.0 mL Volume

Clear Glass



Part Number	Pre-Slit or Non-Slit	Description
MV6014SIS	Non-Slit	MAC-MOD Chrom Verified SIS LC Vial Kit, 12 x 32 mm, 2.0 mL Volume, Clear Glass, Screw Neck Finish, with Bonded Blue Cap and Non-Slit PTFE/Silicone Septum included with Write-On Patch, 100/kit
MV6016SIS	Pre-Slit	MAC-MOD Chrom Verified SIS LC Vial Kit, 12 x 32 mm, 2.0 mL Volume, Clear Glass, Screw Neck Finish, with Bonded Blue Cap and Pre-Slit PTFE/Silicone Septum included with Write-On Patch, 100/kit

Amber Glass



Part Number	Pre-Slit or Non-Slit	Description
MV6015SIS	Non-Slit	MAC-MOD Chrom Verified SIS LC Vial Kit, 12 x 32 mm, 2.0 mL Volume, Amber Glass, Screw Neck Finish, with Bonded Blue Cap and Non-Slit PTFE/Silicone Septum does not include Write-On Patch, 100/kit
MV6017SIS	Pre-Slit	MAC-MOD Chrom Verified SIS LC Vial Kit, 12 x 32 mm, 2.0 mL Volume, Amber Glass, Screw Neck Finish, with Bonded Blue Cap and Pre-Slit PTFE/Silicone Septum does not include Write-On Patch, 100/kit

MAC-MOD Chrom Verified Vials

Part Number Table

HPLC Maximum Recovery Vials with SIS Surface Technology

1.5 mL Volume

Clear Glass



Part Number	Pre-Slit or Non-Slit	Description
MV2006SISMR	Non-Slit	MAC-MOD Chrom Verified SIS LC Maximum Recovery Vial Kit, 12 x 32 mm, 1.5 mL Volume, Clear Glass, Screw Neck Finish, with Bonded Blue Cap and Non-Slit PTFE/Silicone Septum does not include Write-On Patch, 100/kit
MV2009SISMR	Pre-Slit	MAC-MOD Chrom Verified SIS LC Maximum Recovery Vial Kit, 12 x 32 mm, 1.5 mL Volume, Clear Glass, Screw Neck Finish, with Bonded Blue Cap and Pre-Slit PTFE/Silicone Septum does not include Write-On Patch, 100/kit

Amber Glass



Part Number	Pre-Slit or Non-Slit	Description
MV2216SISMR	Non-Slit	MAC-MOD Chrom Verified SIS LC Maximum Recovery Vial Kit, 12 x 32 mm, 1.5 mL Volume, Amber Glass, Screw Neck Finish, with Bonded Blue Cap and Non-Slit PTFE/Silicone Septum included with Write-On Patch, 100/kit
MV2218SISMR	Pre-Slit	MAC-MOD Chrom Verified SIS LC Maximum Recovery Vial Kit, 12 x 32 mm, 1.5 mL Volume, Amber Glass, Screw Neck Finish, with Bonded Blue Cap and Pre-Slit PTFE/Silicone Septum included with Write-On Patch, 100/kit

HPLC Total Recovery Vials with SIS Surface Technology

1.0 mL Volume

Clear Glass



Part Number	Pre-Slit or Non-Slit	Description
MV2382SISTR	Non-Slit	MAC-MOD Chrom Verified SIS LC Total Recovery Vial Kit, 12 x 32 mm, 1.0 mL Volume, Clear Glass, Screw Neck Finish, with Bonded Blue Cap and Non-Slit PTFE/Silicone Septum does not include Write-On Patch, 100/kit
MV2384SISTR	Pre-Slit	MAC-MOD Chrom Verified SIS LC Total Recovery Vial Kit, 12 x 32 mm, 1.0 mL Volume, Clear Glass, Screw Neck Finish, with Bonded Blue Cap and Pre-Slit PTFE/Silicone Septum does not include Write-On Patch, 100/kit

MAC-MOD Chrom Verified Vials

Part Number Table

HPLC Qsert Vials

with SIS Surface Technology

300 μ L Volume

Clear Glass



Part Number	Pre-Slit or Non-Slit	Description
MV2024SISFI	Non-Slit	MAC-MOD Chrom Verified SIS LC Qsert Vial Kit, 12 x 32 mm, 300 μ L Volume, Clear Glass, Screw Neck Finish, with Bonded Blue Cap and Non-Slit PTFE/Silicone Septum included with Write-On Patch, 100/kit
MV2042SISFI	Pre-Slit	MAC-MOD Chrom Verified SIS LC Qsert Vial Kit, 12 x 32 mm, 300 μ L Volume, Clear Glass, Screw Neck Finish, with Bonded Blue Cap and Pre-Slit PTFE/Silicone Septum included with Write-On Patch, 100/kit

Amber Glass



Part Number	Pre-Slit or Non-Slit	Description
MV2036SISFI	Non-Slit	MAC-MOD Chrom Verified SIS LC Qsert Vial Kit, 12 x 32 mm, 300 μ L Volume, Amber Glass, Screw Neck Finish, with Bonded Blue Cap and Non-Slit PTFE/Silicone Septum included with Write-On Patch, 100/kit
MV2044SISFI	Pre-Slit	MAC-MOD Chrom Verified SIS LC Qsert Vial Kit, 12 x 32 mm, 300 μ L Volume, Amber Glass, Screw Neck Finish, with Bonded Blue Cap and Pre-Slit PTFE/Silicone Septum included with Write-On Patch, 100/kit

MAC-MOD Chrom Verified Vials

Part Number Table

LC/MS Compatible Polypropylene (PP) XBS Bio-Inert Hydrophobic Vials

750 μ L Volume



Part Number	Pre-Slit or Non-Slit	Description
MV6060XBS	Non-Slit	MAC-MOD Chrom Verified XBS LC Polypropylene Vial Kit, 12 x 32 mm, 750 μ L Volume, Clear PP, Screw Neck Finish, with Bonded Blue Cap and Non-Slit PTFE/Silicone Septum included, 100/kit
MV6062XBS	Pre-Slit	MAC-MOD Chrom Verified XBS LC Polypropylene Vial Kit, 12 x 32 mm, 750 μ L Volume, Clear PP, Screw Neck Finish, with Bonded Blue Cap and Pre-Slit PTFE/Silicone Septum included, 100/kit

300 μ L Volume



Part Number	Pre-Slit or Non-Slit	Description
MV6026XBS	Non-Slit	MAC-MOD Chrom Verified XBS LC Polypropylene Vial Kit, 12 x 32 mm, 300 μ L Volume, Clear PP, Screw Neck Finish, with Bonded Blue Cap and Non-Slit PTFE/Silicone Septum included, 100/kit
MV6035XBS	Pre-Slit	MAC-MOD Chrom Verified XBS LC Polypropylene Vial Kit, 12 x 32 mm, 300 μ L Volume, Clear PP, Screw Neck Finish, with Bonded Blue Cap and Pre-Slit PTFE/Silicone Septum included, 100/kit

LC/MS Compatible Polypropylene (PP) XBS with HIB Bio-Inert Hydrophilic Vials

750 μ L Volume



Part Number	Pre-Slit or Non-Slit	Description
MV6125XBSHIB	Pre-Slit	MAC-MOD Chrom Verified XBS with HIB LC Polypropylene Vial Kit, 12 x 32 mm, 750 μ L Volume, Clear PP, Screw Neck Finish, with Bonded Blue Cap and Pre-Slit PTFE/Silicone Septum included, 100/kit

300 μ L Volume



Part Number	Pre-Slit or Non-Slit	Description
MV6124XBSHIB	Pre-Slit	MAC-MOD Chrom Verified XBS with HIB LC Polypropylene Vial Kit, 12 x 32 mm, 300 μ L Volume, Clear PP, Screw Neck Finish, with Bonded Blue Cap and Pre-Slit PTFE/Silicone Septum included, 100/kit

MAC-MOD Chrom Verified Vials

Part Number Table

XPS PFAS-Inert LC/MS Polypropylene (PP) Vials

750 μ L Volume



Part Number	Pre-Slit or Non-Slit	Description
MV4004XPS	Septumless	MAC-MOD Chrom Verified XPS LC/MS Polypropylene Vial Kit, 12 x 32 mm, 750 μ L Volume, Clear PP, Screw Neck Finish, with Septumless Cap, 100/kit

300 μ L Volume



Part Number	Pre-Slit or Non-Slit	Description
MV4002XPS	Septumless	MAC-MOD Chrom Verified XPS LC/MS Polypropylene Vial Kit, 12 x 32 mm, 300 μ L Volume, Clear PP, Screw Neck Finish, with Septumless Cap, 100/kit



LC & LC/MS Chrom Verified



MAC-MOD LC & LC/MS Chrom Verified Glass and Polypropylene (PP) Vial Kits



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