Supporting Products for Algal Toxin LC-MS Analysis

Algal toxin standards & QC materials

Algal toxin test strip kits

AbraScan[®] test strip reader

Algal toxin proficiency testing programs



Gold Standard Diagnostics Horsham, Inc. Phone: (215) 357-3911 Email: sales.abraxis@us.goldstandarddiagnostics.com www.abraxiskits.com

Supporting Products for Algal Toxin LC-MS Analysis

Algal toxin standards & QC materials

We offer the widest selection of algal toxin standards and quality control materials including:

- Certified reference materials (CRMs)
- High quality analytical standards
- Labeled standards
- Neat materials & spiking solutions

Certified reference materials

- ISO 17034 CIFGA certified reference materials
- · Highest assurance in accuracy of analytical data
- Tested via multiple methods to ensure homogeneity and concentration
- Certificates of analysis available

Use:

- Highest quality method development
 & validation
- Instrument calibration

Part #	Description	Qty	Conc.
300582	Microcystin RR Standard, Certified	0.5 mL	~10 µg/mL
300586	Anatoxin-a (+) Standard, Certified	0.5 mL	~5 µg/mL
300588	Cylindrospermopsin Standard, Certified	0.5 mL	~10 µg/mL
300590	Saxitoxins Standard, Certified	0.5 mL	~20 µg/mL
300591	Nodularins Standard, Certified	0.5 mL	~10 µg/mL
300639	Microcystin LR Standard, Certified, in 50% ACN	0.5 mL	~10 µg/mL

High quality analytical standards



- Help to ensures accuracy of analytical data
- Tested/quantified using extinction coefficients (OD values)
- Certificates of analysis available

Use:

- Analytical method development and validation
- Instrument calibration

Part #	Description	Qty	Conc.
300620	ABRAXIS® Anatoxin-a (+) Standard	0.5 mL	10 µg/mL
300655	ABRAXIS® Dihydroanatoxin-a Standard	0.5 mL	10 µg/mL
301295	ABRAXIS® Homo-anatoxin-a Standard	0.5 mL	4 µg/mL
300626	ABRAXIS® Cylindrospermopsin Standard	1.0 mL	10 µg/mL
300628	ABRAXIS® Microcystin LA Standard	1.0 mL	10 µg/mL
300646	ABRAXIS® Microcystin LF Standard	1.0 mL	10 µg/mL
300632	ABRAXIS® Microcystin LR Standard	1.0 mL	10 µg/mL
300650	ABRAXIS® Microcystin LW Standard	1.0 mL	10 µg/mL
300636	ABRAXIS® Microcystin RR Standard	1.0 mL	10 µg/mL
300652	ABRAXIS® Microcystin WR Standard	1.0 mL	10 µg/mL
300638	ABRAXIS® Microcystin YR Standard	1.0 mL	10 µg/mL
300654	ABRAXIS® Microcystin HilR Standard	1.0 mL	10 µg/mL
300656	ABRAXIS® Desmethyl Microcystin LR Std	1.0 mL	10 µg/mL
300640	ABRAXIS® Nodularins Standard	1.0 mL	10 µg/mL
300642	ABRAXIS® Saxitoxin Standard, in ethanol	1.0 mL	10 µg/mL



Labeled standards

- High purity, isotopically labeled versions of common toxins
- Tested/quantified using extinction coefficients (OD values)
- · Certificates of analysis available

Use:

- Internal standard for LC-MS/MS analysis
- Accounts for sample loss during sample preparation
- Evaluates ion suppression from sample matrix effects
- Assessment of injection volume accuracy

Neat materials & spiking solutions

- High purity, high concentration or neat (dry) materials
- Tested/quantified using extinction coefficients (OD values)
- · Certificates of analysis available

Use:

- Preparation of matrix spikes
- Interference studies

Part #	Description	Qty	Conc.
In solution			
300505	13 C4-(+)-Anatoxin-a Standard	0.5 mL	10 µg/mL
300504	[15N5] Cylindrospermopsin, in MeOH	0.5 mL	10 µg/mL
300502	Microcystin LR Deuterated (D7) Standard	0.5 mL	10 µg/mL
300500	Microcystin LR Deuterated Standard	0.5 mL	10 µg/mL
Neat (dry)			
300622	BMAA D3 Standard	1.0 mg	Neat
300508	[15N5] 7-deoxy-Cylindrospermopsin, dry	5.0 µg	Neat
300506	[15N5] 7-epi-Cylindrospermopsin, dry	5.0 µg	Neat
300507	Microsystin LR Ethylated (D5, 99%)	25.0 µg	Neat
300956	[15N]7 Saxitoxin Standard, dry	5.0 µg	Neat

Part #	Description	Qty	Conc.
300624	ABRAXIS® Cylindrospermopsin Standard	0.5 mg	Neat
300653	ABRAXIS® 7-deoxy-Cylindrospermopsin, dry	5.0 µg	Neat
300651	ABRAXIS® 7-epi-Cylindrospermopsin, dry	5.0 µg	Neat
300630	ABRAXIS® Microcystin LR Standard	0.5 mg	Neat
300702	ABRAXIS® Microcystins/Nodularins (ADDA) Spiking Solution, MCT-LR	10 mL	50 µg/L

Algal toxin test strip kits

ABRAXIS[®] lateral flow test strips are simple to use and provide results in under an hour. Couple them with our hand-held AbraScan[®] test strip reader for semi-quantitative test results.

- Qualitative/semi-quantitative
- · No expensive equipment required
- Result turnaround in <1 h
- No prior lab skills required
- ~ 100 expensive equipment
- •~ \$25- \$45/sample



Use:

- · Lab sample triage to avoid MS source contamination, high associated repair costs and instrument downtime
- · Field-based testing to guide sampling for later lab evaluation
- · Testing applications in remote areas and citizen/volunteer monitoring

Toxin	Test range	5-test kit	20-test kit
Anatoxin-a	0.4 - 2.5 ppb*	520042	520043
Cylindrospermopsin	0.5 – 10.0 ppb*	520029	520030
Microcystins Finished Drinking Water	0.5 - 5.0 ppb*	520016	520017
Microcystins Finished Drinking Water 0.3	0.3 – 3.0 ppb*	N/A	520046
Microcystins Source Drinking Water	0.5 – 5.0 ppb*	520019	520020
Microcystins Recreational Water	1.0 - 10.0 ppb*	520023	520022

NOTE: Kits include materials and reagents for sample analysis. Additional materials may be required for sample prep and collection. Consult user's guide.

*The upper range of detection can be extended by further sample dilution prior to analysis. Application for additional sample matrices are also available. Contact support.abraxis@us.goldstandarddiagnostics.com for assistance.

AbraScan® test strip reader

The hand-held AbraScan Test Strip Reader is compatible with ABRAXIS[®] lateral flow test strips. The easy-to-use reader eliminates the need for subjective visual comparison of control and test line intensities and maintains a digital photographic record of all test strip results.

- Pre-programmed for ABRAXIS® Algal toxin test strip kits
- Objectively analyzes a test strip in 5-10 seconds
- · Rugged, requires minimal maintenance
- · Intuitive user interface and color touchscreen display
- · Proprietary line detection algorithms adjust for variability in test strip positioning

Use:

- · Remove subjectivity from test strip result interpretation
- · Increase consistency across multiple users versus visual result interpretation
- Result traceability and review

Part #	Description
475025B	Abrascan® Dipstick Reader III, handheld reader with supplemental software

Algal toxin proficiency testing programs

- Annual drinking water round late Q1/early Q2
- Annual recreational/raw water round late Q2/early Q3
- Online registration
- Participants receive a unique code to keep results confidential unless release is authorized
- · Materials for sample prep and analysis are sold separately

Use:

- Obtain an independent assessment of laboratory performance
- Assess lab performance against other labs
- Demonstration of lab capabilities and competency

Proficiency Testing Process Overview

Registration •••

Customer submits online registration form. A completed registration form and PO are required to finalize registration

Distribution •

We produce and distribute test samples (water samples spiked with known toxin congeners and concentrations)

Testing & Results • • •

Each participant lab tests the samples using its own equipment, test method (i.e., HPLC, ELISA, PP2A, etc.) and personnel and forwards the results back to us

Final Reports

We prepare and send a program report including lab reported results, method used and statistical evaluation of results compared to other labs performing the same analysis









Gold Standard Diagnostics Horsham, Inc. Phone: (215) 357-3911 Email: sales.abraxis@us.goldstandarddiagnostics.com www.abraxiskits.com