

Microcystins: An Analytical Perspective

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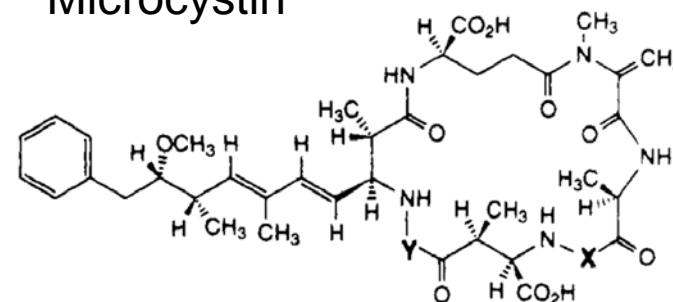
Microcystin Analysis

- Sample Prep
 - Freeze/thaw 3x
 - Filter
 - Aliquot, add internal standard
- Analysis
 - 27 minute analysis
 - Same or better sensitivity than ELISA test for all analytes

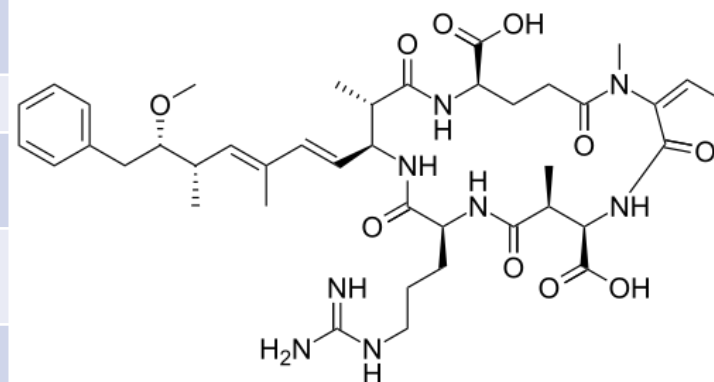
Microcystins

Compound	X	Y	MW	ELISA Cross-Reactivity
MC-LR	Leucine (L)	Arginine (R)	995.17	1.00
MC-RR	Arginine (R)	Arginine (R)	1038.2	0.53
MC-YR	Tyrosine (Y)	Arginine (R)	1045.19	0.64
MC-LA	Leucine (L)	Alanine (A)	910.06	0.48
MC-LY	Leucine (L)	Tyrosine (Y)	1002.2	0.736
MC-LW	Leucine (L)	Tryptophan(W)	1025.20	1.02
MC-LF	Leucine (L)	Phenylalanine (F)	986.16	0.72
Nodularin			825.2	0.76

Microcystin



Nodularin



Quick Facts

	LCMS	ELISA
Sensitivity	0.1-0.3 µg/L for each variant	0.3 µg/L for total
Linear Range (without dilution)	Up to 10 µg/L	Up to 5 µg/L



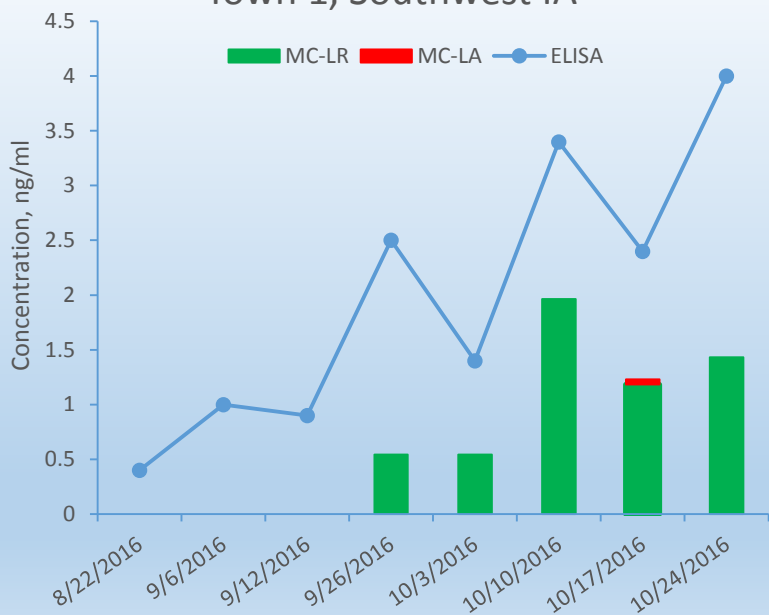
Accurate
Sensitive
Simple, rapid
sample
preparation
Identifies
congeners

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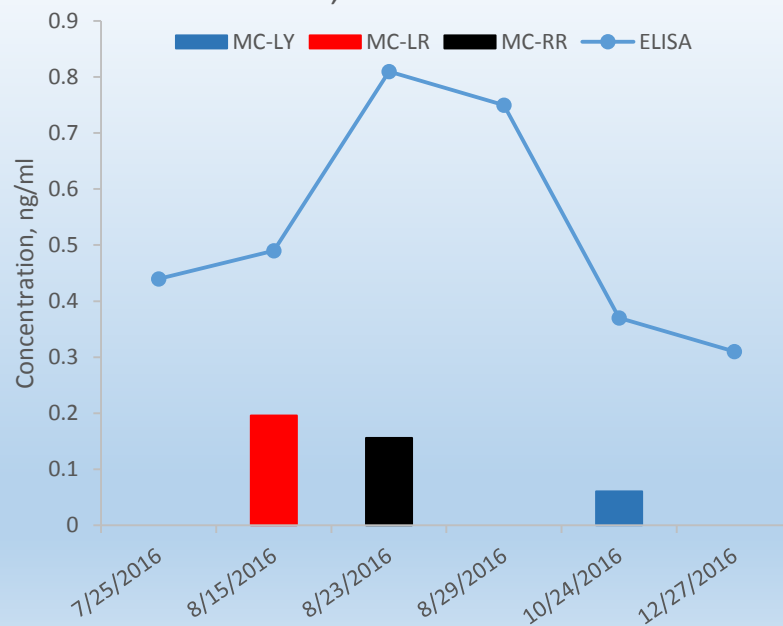
SHL is
offering the
same price
as ELISA
test

Microcystin Profiles

Town 1, Southwest IA



Town 4, South Central IA



Microcystin Profiles

