

## Shellfish Toxin End-Product Test Quick Reference Guide

Toxin Group / Regulatory Limit	Test Methods and Regulatory Status	Quantitative or Qualitative	Limitations / Availability	Recommendation
<b>PSP</b> 800 micrograms saxitoxin equivalents/kg.	Antibody based ELISA kits such as R- Biopharm RIDASCREEN® Fast PSP SC and Biosense Abraxis® kits.	Semi-quantitative	Limited toxin coverage. Available from commercial testing companies and suitable for in-house implementation.	Antibody based kits are suitable for EPT, but the results only provide an indication of the levels of PSP toxins that may be present in shellfish.  To get an accurate measure of toxicity, that is comparable to regulatory limits, use HPLC.
	Antibody based lateral flow tests (dip-stick style tests), such as Jellett® Rapid PSP Test.	Qualitative	Limited toxin coverage. Suitable for in-house implementation, including farm-based testing.	
	HPLC Regulatory method.	Fully quantitative	Only available from specialist testing laboratories. Can be used for Official Control samples.	
<b>DSP</b> Diarrhetic shellfish poisoning (DSP) toxins and pectenotoxins (PTX) together, 160 micrograms of okadaic acid equivalents/kg.	Antibody based ELISA kits, such as UBE Industries DSP-Check®, Biosense Abraxis® DSP and Rougier Bio-Tech® tests.	Semi-quantitative	Limited toxin coverage - several tests required to cover all toxins. Available from commercial testing companies and suitable for in-house implementation.	Antibody based kits and functional assays are suitable for EPT, but the results only provide an indication of the levels of DSP toxins that may be present in shellfish.  To get an accurate measure of toxicity, that is comparable to regulatory limits, use LC-MS/MS. This is the only available method for pectenotoxins.
	Antibody based lateral flow tests (dip-stick style tests), such as Jellett® DSP Rapid Test.	Qualitative	Limited toxin coverage. Suitable for in-house implementation, including farm-based testing.	
	Functional assay - Phosphatase Inhibition Assay (PP2A), such as Zeu-Inmunotec Toxiline-DSP kit and Sceti K.K. DSP rapid kit.	Quantitative - Sum of okadaic acid and dinophysistoxins 1, 2 and 3.	Limited toxin coverage. Available from commercial testing companies. Assay gives a good indication of the total toxicity of a sample due to DSP toxins, but does not detect pectenotoxins.	
	LC-MS/MS Regulatory method.	Fully quantitative	Only available from specialist testing laboratories. Can be used for Official Control samples.	
<b>AZP &amp; Yessotoxins</b> AZP 160 micrograms of azaspiracid equivalents / kg Yessotoxin 1 milligrams /kg	LC-MS/MS Regulatory method.	Fully quantitative	Only available from specialist testing laboratories. Can be used for Official Control samples.	Suitable for EPT. Gives accurate measure of toxicity.
<b>ASP</b> 20 milligrams domoic acid/kg.	Biosense® ASP ELISA (2006.02 AOAC) Regulatory method for screening purposes.	Semi-quantitative	Available from commercial testing companies and suitable for in-house implementation. Assay gives a good indication of the total toxicity. Can be used for Official Control samples	Antibody based kits are suitable for EPT, but the results only provide an indication of the levels of ASP toxins that may be present in shellfish.  To get an accurate measure of toxicity, that is comparable to regulatory limits, use HPLC.
	Lateral flow tests (dip-stick style tests), such as Jellett® ASP Rapid Test.	Qualitative antibody based test	Suitable for in-house implementation, including farm-based testing.	
	HPLC Regulatory method.	Fully quantitative	Only available from specialist testing laboratories. Can be used for Official Control samples.	