OKADAIC ACID ELISA (5191OKA)

General

High concentrations of shellfish toxins can accumulate in filter feeders such as clams, mussels, and oysters causing illness amongst people who eat them. There are four syndromes called shellfish poisoning, i.e. paralytic shellfish poisoning (PSP), neurotoxic shellfish poisoning (NSP), diarrhetic shellfish poisoning (DSP) and amnesic shellfish poisoning (ASP). DSP is primarily caused by the polyether toxin okadaic acid (OA) and several analogues of OA, among which the dinophysistoxins DTX1, DTX2, and DTX3.

In the European Union, Regulation (EC) no 853/2004 stipulates that live bivalve mollusks must not contain OA in total quantity (measured in the whole body or any part edible separately) that exceeds a limit of 160 μg OA equivalents (OA, dinophysistoxins, and pectenotoxins together) per kilogram.

The okadaic acid ELISA is a competitive enzyme immunoassay for screening the presence of okadaic acid residues in various matrices. Samples are measured in duplicate which means that in total 40 samples can be analysed.

Kit characteristics

- **Microtiter plate:**
  12 x 8 break 4 wells

- **Antibody cross-reactivity:**
  - Okadaic acid: 100%
  - Dinophysistoxins DTX-1: 78%
  - Dinophysistoxins DTX-2: 2.6%
  - Gonyautoxin GTX 5: < 0.1%
  - Decarbamoyl saxitoxin: < 0.1%
  - Gonyautoxins GTX 2/3: < 0.1%
  - Neosaxitoxin: < 0.1%
  - Decarbamoyl neosaxitoxin: < 0.1%
  - Decarbamoyl GTX 2/3: < 0.1%
  - C1 and C2: < 0.1%
  - B1 and B2: < 0.1%
  - Gonyautoxins GTX 1/4: < 0.1%
  - Saxitoxin: < 0.1%
  - Domoic acid: < 0.1%

- **Conjugate:**
  - OA-HRP stabilized

- **Standard range (ready-to-use):**
  0, 0.2, 0.5, 1.0, 2.0, 5.0, and 10.0 ng/ml

Assay characteristics

<table>
<thead>
<tr>
<th>Matrices</th>
<th>LOD (ppb)*</th>
</tr>
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<tbody>
<tr>
<td>Mussel</td>
<td>50</td>
</tr>
<tr>
<td>Oyster</td>
<td>50</td>
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* LOD (Limit of Detection); Validation according to SANCO/1085/2000.