



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.

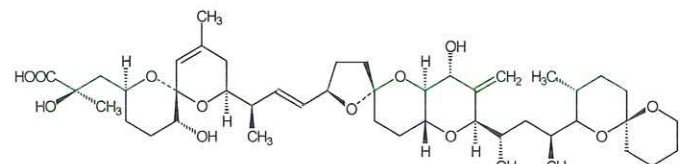
In the European Union, Regulation (EC) no 853/2004 stipulates that live bivalve mollusks must not contain OA in total quantity (measured in the whole body or any part edible separately) that exceeds a limit of 160 µg OA equivalents (OA, dinophysistoxins, and pectenotoxins together) per kilogram.

The okadaic acid ELISA is a competitive enzyme immunoassay for screening on 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



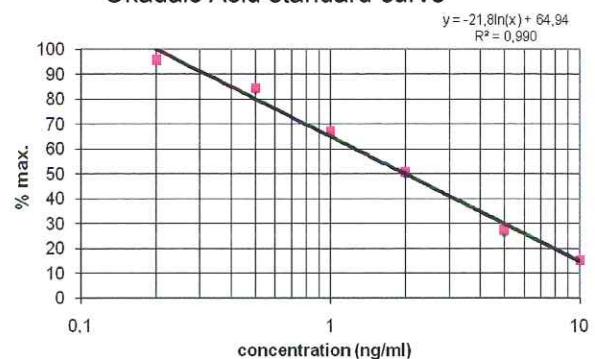
Chemical structure of okadaic acid (OA)

Assay procedure

Microtiter wells are precoated with sheep antibodies to rabbit IgG. Rabbit anti-OA antibodies, OA-HRP as well as OA standard solution or samples are added to the precoated wells and incubated for 30 minutes at RT.

After a washing procedure, ready-to-use substrate/chromogen is added and incubated for 15 minutes at RT. The reaction is stopped and a read-out is performed in a spectrophotometer at 450 nm.

Okadaic Acid standard curve



Assay characteristics

Matrices	LOD (ppb)*
Mussel	50
Oyster	50

* LOD (Limit of Detection); Validation according to SANCO/1085/2000.