

Triclosan in Water

• Intended Use

For detection of Triclosan and Triclosan methyl in water samples: groundwater, surface water, well water, effluent.

• Materials Required but Not Provided

Methanol (HPLC Grade or equivalent).

• Sample Information

Water samples should be collected in glass vessels (teflon in the cap liners). **Immediately** upon collection, methanol (HPLC grade) should be added to the samples (25% v/v final concentration of methanol) to prevent adsorptive losses to the glass containers.

After samples are diluted, those samples containing gross particulate matter should be filtered (e.g. 0.2 um Anotop™ 25 Plus, Whatman, Inc.) to remove particles.

• Procedural Notes and Precautions

Prepare water samples as described above. Follow the assay procedure as described in the Triclosan Microtiter Plate kit package insert.

As with all immunoassays, a consistent technique is the key to optimal performance. To obtain the greatest precision, be sure to treat each well in an identical manner.

Add reagents directly to the bottom of the wells while **avoiding contact between the reagents and the pipet tip**. This will help assure consistent quantities of reagent in the test mixture.

Avoid cross-contaminations and carryover of reagents by using clean pipets for each sample addition and by avoiding contact between reagent droplets on the wells and pipet tips.

• Results

Manual Calculations

1. Calculate the mean absorbance value for each of the standards.
2. Calculate the %B/Bo for each standard by dividing the mean absorbance value for the standard by the mean absorbance value for the Diluent/Zero Standard.
3. Construct a standard curve by plotting the %B/Bo for each standard on vertical Ln (Y) axis versus the corresponding Triclosan concentration on horizontal Linear (X) axis on the graph paper provided.
4. %B/Bo for controls and samples will then yield levels in ppt of Triclosan by interpolation using the standard curve.

Multiply the sample and control results by a factor of 1.33 to account for the initial dilution of sample with methanol or alternatively program the microplate reader to automatically correct for the dilution factor.

• Performance Data

Sensitivity

The Triclosan Microtiter Plate Assay has an estimated minimum detectable concentration in water, based on a 90% B/Bo of 20 ppt (0.020 ppb).

Recovery

Four (4) samples, including a municipal water source, drinking water from a local well, a sample from a local pond and a small creek were spiked with various levels of Triclosan, diluted with methanol, and then assayed using the Triclosan Microtiter Plate Assay. The following results were obtained:

Amount of Triclosan Added (ppb)	Mean (ppb)	S.D. (ppb)	Recovery %
0.5	0.467	0.029	93
1	1.122	0.079	112
2	2.146	0.082	107
Average			104

Precision

The following results were obtained:

Control	1	2	3
Replicates	5	5	5
Days	5	5	5
n	25	25	25
Mean (ppb)	0.097	0.236	0.926
% CV (within assay)	9.7	7.3	8.3
% CV (between assay)	12.4	12.4	9.6

• Assistance

For ordering or technical assistance contact:

Abraxis LLC
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• Availability

Abraxis Triclosan Assay Kit, 96T PN 530114
Triclosan Sample Diluent PN 530112