

MODERNWATER

# RaPID Assay<sup>®</sup>

## Atrazine

RaPID Assay<sup>®</sup> is a rapid field or laboratory enzyme immunoassay method for the analysis of soil and water for remediation, assessment, and industrial testing.

### Test result type

- Quantitative, semi-quantitative or qualitative depending on protocol selected

### Samples per kit

- 100 test kit (tests up to 80+ samples)

### Assay range

- 0.04 to 5.0 ppb
- LDD = 0.1 ppb

### Sample methods

- Methods exist for soil and a wide variety of commodities

### Sampling time

- 'Sample-to-Data' in approximately 60 minutes

- Rapid field testing procedure for analysis of soil, food or water samples
- Quantitative data results with excellent analytical precision
- Results available in approximately 60 minutes
- Tests up to 50 samples at once
- Magnetic particle immunoassay
- Training available
- EPA SW-846 method #4670 for drinking water



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## Specificity

The proprietary antibody used in this assay is specific for atrazine. The cross-reactivity of the Atrazine RaPID Assay® for various triazine analogues can be expressed as least detectable dose (LDD) which is estimated at 90% B/B<sub>0</sub> or as the concentration estimated (inhibitory concentration) at 50% B/B<sub>0</sub> (IC<sub>50</sub>).

| ATRAZINE RAPID ASSAY (PPB) |       |                  |
|----------------------------|-------|------------------|
| Contaminant                | LDD   | IC <sub>50</sub> |
| Atrazine                   | 0.046 | 0.72             |
| Ametryn                    | 0.053 | 0.39             |
| Propazine                  | 0.033 | 0.74             |
| Prometryn                  | 0.054 | 0.64             |
| Prometon                   | 0.056 | 2.22             |
| Simazine                   | 0.340 | 4.90             |
| Terbutryn                  | 0.090 | 5.50             |
| Terbutylazine              | 0.310 | 15.5             |
| Desethyl Atrazine          | 0.062 | 3.21             |
| Cyanazine                  | 1.000 | >10,000          |
| 6-Hydroxy Atrazine         | 1.100 | 148              |
| Desisopropyl Atrazine      | 0.800 | 217              |

## Basic Test Procedure

- Add 200 µL of calibrator or prepared sample, 250µL enzyme conjugate and 500 uL antibody coupled magnetic particles. Vortex
- Incubate for 15 minutes
- Using the RaPID magnetic separator, decant and wash
- Add 500 µL colour solution
- Incubate for 20 minutes
- Stop the reaction and read colour at 450 nm
- Quantitative results and QC parameters are calculated and printed automatically using the RPA-II® spectrophotometer

## Test kit components

- Antibody coated magnetic particles, enzyme conjugate, colour development, stop and wash reagents for analysis of 100 test tubes
- Standards for 0.1 1.0 and 5.0 ppb Atrazine
- Zero standard and 3.0 ppb control standard
- Disposable test tubes
- Test kit instructions

## Storage & precautions

- Shelf life is typically one year from date of manufacture, with specific kit expiration date information provided on product packaging
- Reagents must be stored at 39° to 46°F (4° to 8°C) when not in use
- Store at ambient temperature 64° to 81°F (18° to 27°C) is acceptable for day of use
- Kits must be brought to 64° to 81°F (18° to 27°C) before use
- Do not expose colour solution to direct sunlight

## Required test materials

- Atrazine RaPID Assay
- Atrazine sample diluent (100 mL)

## Part #

A00071  
A00051

## Required test equipment

- Accessory kit (purchase) 6050100
- Accessory kit (rental) 6997010
- Accessory kit components:
  - Magnetic separation rack A00004
  - Repeator pipette A00008
  - Adjustable volume pipette A00176
  - RPA-II analyser with printer 6000111
  - Vortex mixer A00014
  - Digital timer A00015



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