# ALDetect™ Lipid Peroxidation assay kit

Lipid peroxidation is a well-established mechanism of cellular injury in both plants and animals, and is used as an indicator of oxidative stress in cells and tissues. Lipid peroxides are unstable and decompose to form a complex series of compounds including reactive aldehydes. Polyunsaturated fatty acid peroxides generate malondialdehyde (MDA) and 4-hydroxyalkenals (HAE) upon decomposition. Measurement of malondialdehyde and 4-hydroxyalkenals has been used as an indicator of lipid peroxidation.The BML-AK170 assay is designed to measure either MDA alone (in hydrochloric acid) or MDA in combination with 4-hydroxyalkenals (in methanesulfonic acid). The BML-AK170 assy is based on the reaction of a chromogenic reagent, N-methyl-2-phenylindole with MDA and 4-hydroxyalkenals to yield a stable chromophore with maximal absorbance at 586 nm.

**Citations:** 9 View Online »

## Ordering Information

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|---|---|
| **BML-AK170-0001** | 100 tests |

## Manuals, SDS & CofA

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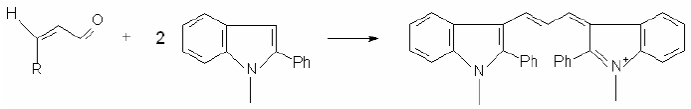


**Fig:**The AK-170 assay is based on the reaction of a chromogenic reagent, N-methyl-2-phenylindole (R1), with MDA and 4-hydroxyalkenals at 45°C. One molecule of either MDA or 4-hydroxyalkenal reacts with 2 molecules of reagent R1 to yield a stable chromophore with maximal absorbance at 586 nm. For simultaneous determination of MDA and 4-hydroxyalkenals, one must use the procedure utilizing methanesulfonic acid (MSA) as the acid solvent. The procedure in which HCl is used will only detect MDA, since the 4-hydroxyalkenals do not form a chromophore with reagent R1 under those conditions.MDA: R = OH, 4-hydroxyalkenal: R = hydroxyalkyl. $\lambda_{max}$ = $586_{max}$ nm

## Handling & Storage

**Use/Stability** Do not allow the capped reagent bottles to sit at room temperature for long periods of time. When not in use, place the bottles at 4°C. Reagent R2, methanesulfonic acid (MSA), freezes at 19°C or colder. This reagent does not need to be refrigerated, but, if it is stored with the rest of the assay kit at 2-8°C, it may easily be thawed by leaving at room temperature for a few hours prior to use. If reagents are handled and stored properly as described above, they are stable until the indicated expiration date.

**Handling** Do not freeze.

**Long Term Storage** +4°C

**Shipping** Blue Ice – Dangerous Good

## Regulatory Status

RUO - Research Use Only

## Product Details

**Application** Colorimetric detection

**Contents**

**Reagent R1** (Prod. No. BML-KI527)(3×18 ml; N-methyl-2-phenylindole, in acetonitrile) Storage: 4°C
**Reagent R2** (Prod. No. BML-KI528)(16.5 ml; conc. methanesulfonic acid) Storage: 4°C
**MDA Standard** (Prod. No. BML-KI529)(1ml; 1,1,3,3-tetramethoxypropane (TMOP) in TRIS-hydrochloric acid) Storage: 4°C
**Diluent** (Prod. No. BML-KI533)(30ml; ferric iron in methanol) Storage: 4°C

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