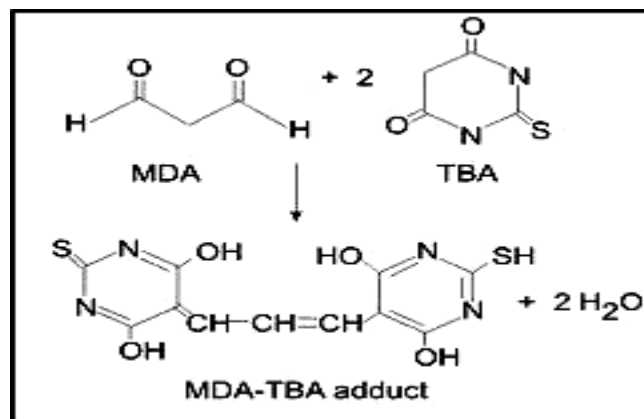


Malondialdehyde (MDA) Assay kit (96 Tests)

INTRODUCTION

Biocore Diagnostik (ZellBio) MDA assay Kit provides a simple, reproducible, and standardized tool for assessment of lipid peroxidation in biological sample e.g. **plasma, serum, urine, tissue homogenates, and cell lysates**. The MDA-TBA adduct formed by the reaction of MDA and TBA under high temperature. Malondialdehyde is measured in acidic media and heat (90-100°C) colorimetrically at 532 (530-540 nm).



Kit Contents (ZB-MDA96):

1. Reagent 1: BCD-R1 (contains TBA) 1000mg (MDA31).
2. Reagent 2: BCD-R2 (contains 5X of HOAC) 20mL (MDA32).
3. Reagent 3: BCD-R3 (contains Standard 500 μ M) 0.5mL (MDA33).
4. Reagent 4: BCD-R4 (contains 10X Alkali) 10mL (MDA34).
5. Reagent 5: BCD-R5 (contains Detergent) 12mL (MDA35).
6. BCD-R6 (contains microplate) 1 plate (MDA36)

Assay Range:

Biocore (ZellBio) MDA assay kit can be used for MDA determination in range of 0.78 - 50 μ M.

Assay Sensitivity:

Biocore (ZellBio) MDA assay kit can determine MDA in biological samples with 0.1 μ M sensitivity.

Assay Precision:

Human serum sample with replication No.10 showed the intra and inter assay coefficient of variation 5.8% and 7.6% respectively.

Reagent preparation:

- 1) R2 ready reagent: Add 80mL distilled water to 20mL BCD-R2.
- 2) R4 ready reagent: Add 90mL distilled water to 10mL BCD-R4.
- 3) Chromogenic reagent: Mix 1000mg of BCD-R1 with 100mL R2 ready reagent and 100mL R4 ready reagent. Warm slowly until powder dissolves completely. This reagent stable for a day. So, it can prepare the Chromogenic solution as it need with the same proportion. For example 500mg R1+50mL ready R2 and 50ml Ready R4.
- 4) Standard solutions: The stock standard is 500 μ M; by serial dilution prepare 50 μ M, 25 μ M, 12.5 μ M, 6.25 μ M, 3.12 μ M, 1.56 μ M and 0.78 μ M.

Assay Protocol:

1. All reagents (except samples) must be equilibrated to RT. Shake the unknown sample for homogenation well.
2. Add 100 μ L standards/samples to related name test tubes.
3. Add 100 μ L R4 reagent (if it is cloudy, warm until to become a clear solution).
4. Add 200 μ L ready Chromogenic solution.
5. Heat the above mixture for one hour at boiling water bath (pink color formation).
6. Cool the above tests tube in ice bath and centrifuge them 10min around 10,000 rpm.
7. Pipette 200 μ L of pink color supernatant into the microplate.
8. Read the absorbance at 535nm.
9. Calculate MDA level in unknown samples based on standard curve which drawn using standard points' absorbance.

References

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- 2) Yagi, K. Simple assay for the level of total lipid peroxides in serum or plasma. *Methods in Molecular Biology* 108, 101-106 (1998).
- 3) Ohkawa, H., Ohishi, N., and Yagi, K. Assay for lipid peroxides in animal tissues by thiobarbituric acid reaction. *Anal. Biochem.* 95, 351-358 (1979).

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