

Commentary to: “Improving the thiobarbituric acid-reactive-substances assay for estimating lipid peroxidation in plant tissues containing anthocyanin and other interfering compounds” by Hodges et al., *Planta* (1999) 207: 604-611.

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The thiobarbituric acid-reactive-substances (TBARS) assay developed by Hodges et al. (1999) is nowadays the most popular method for the determination of malondialdehyde (MDA) by-products in plant tissue. In the original method, the following equations are proposed:

$$(1.1) [(Abs_{532_{+TBA}}) - (Abs_{600_{+TBA}}) - (Abs_{532_{-TBA}} - Abs_{600_{-TBA}})] = A$$

$$(1.2) [(Abs_{440_{+TBA}} - Abs_{600_{+TBA}}) \cdot 0.0571] = B$$

$$(1.3) \text{MDA equivalents (nmol} \cdot \text{ml}^{-1}) = (A - B / 157000) \cdot 10^6$$

where 532 nm is the maximum absorbance of the TBA-MDA complexes, 600 nm the correction factor for nonspecific turbidity, 440 nm the correction factor for interference generated by sucrose, and 157000 the molar extinction coefficient for MDA.

Even though that method has deservedly received more than 1200 citations (Scopus, 2017), the equation ^(1.3) does contain a mistake in its present form and should be corrected to:

$$(1.4) (A - B) / 157000 \cdot 10^6$$

Indeed, the molar extinction coefficient for MDA has to be applied to (A – B) and not to the values of B *per se*, as per the original equation ^(1.3). This mistake, which can be detectable by a trained eye, can generate an incorrect calculation of TBARS level by less expert users. The aim of this corrigendum is therefore to remedy the spread of the wrong equation for TBARS calculation proposed by Hodges et al. (1999).

References

Hodges DM, DeLong JM, Forney CF, Prange RK (1999) Improving the thiobarbituric acid reactive substances assay for estimating lipid peroxidation in plant tissues containing anthocyanin and other interfering compounds. *Planta* 207: 604–611

Scopus (2017) <https://www.scopus.com/authid/detail.uri?authorId=7103260350> (last access 12th April, 2017).