Lipid staining in plant material with Sudan Red 7B*

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★ Sudan Red 7B (= Fat Red 7B)* stains neutral lipids, and it can be used for histochemical staining of triacylglycerols (TAG) stored in the oil body.

1) Reagents

1. Fat Red 7B: MP Biomedicals 158036
2. PEG-300: Wako 164-09055

2) Staining solution (0.1% (w/v) Sudan Red 7B)

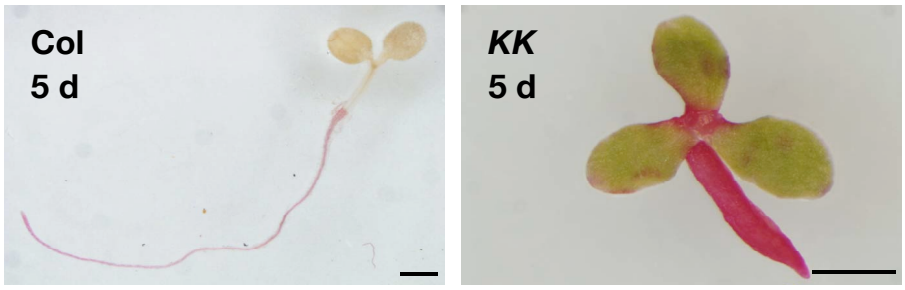
Brundrett *et al.* (1991)

1. Dissolve 50mg Fat Red 7B in 25mL PEG-300.
2. Incubate for 1 hr at 90˚C and cool down.
3. Add equal volume of 90% glycerol.
4. Store at room temperature.

3) Procedure

1. Soak plant tissues in staining solution for1 hr to overnight.
2. Rinse several times with water.

Example)



Five-day-old seedlings of Col-0 wild-type (left) and *KK* mutant (right) were stained with Fat Red 7B. In seedlings of the *KK* mutant, in which two genes for B3-EAR transcriptional repressors were disrupted, seed maturation genes are de-repressed and large quantities of seed storage materials are synthesized. Tsukagoshi *et al.* (2007)

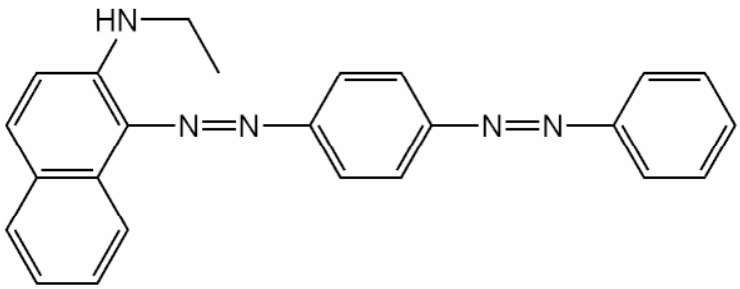
*References

Brundrett, M. C., Kendrick, B. and Peterson, C. A. Efficient Lipid Staining in Plant Material with Sudan Red 7B or Fluoral Yellow 088 in Polyethylene Glycol-Glycerol. *Biotech. Histochem*. **66,** 111-116. (1991)

Tsukagoshi, H., Morikami, A. and Nakamura, K. Two B3 domain transcriptional repressors prevent sugar-inducible expression of seed maturation genes in *Arabidopsis* seedlings. *Proc. Natl. Acad. Sci. USA,* **104**: 2543-2547 (2007).

* Sudan Red 7B

Diazo dye. C.I. 26050. Synonyms: Fat Red 7B, Solvent Red 19, Oil violet.



$C_{24}H_{21}N_5$ M.W. 379.5