



## Product Information Sheet

# R7278 Ruthenium Red, Tetrahydrate

Synonyms: Ammoniated Ruthenium Oxochloride, Cl# 77800  
CAS: 12790-48-6  
Formula:  $H_4Cl_6N_{14}O_2Ru_3 \cdot 4H_2O$   
Mol. Weight: 858.42

### Properties

Form: Powder  
Appearance: Dark Violet  
Solubility: Water  
Application: Biological Stain, Seed Testing  
Storage Temp: Room Temperature  
Typical Working Concentration: Varies with application, should be determined by end user.

### Application Notes

Ruthenium Red is used to stain pectins, mucilages and gums within plant material. Can be used to stain seed mucilage when using a concentration of 0.01% solution (Arsovski et al., 2009; Gonzalez et al., 2009). The seeds are allowed to soak in this solution until all mucilage is stained.

### References

- Arsovski AA, MM Villota, O Rowland, R Subramaniam and TL Western (2009) MUM ENHANCERS are important for seed coat mucilage production and mucilage secretory cell differentiation in *Arabidopsis thaliana*. *Journal of Experimental Botany*. doi:10.1093/jxb/erp102.
- Gonzalez A, J Mendenhall, Y Huo, A Lloyd (2009) TTG1 complex MYBs, MYB5 and TT2, control outer seed coat differentiation. *Developmental Biology* 325. Pp. 412–421.
- Gunawardena A, JS Greenwood & NG Dengler (2007) Cell Wall Degradation and Modification During Programmed Cell Death in Lace Plant, *Aponogeton Madagascariensis* (Aponogetonaceae). *American Journal of Botany* 94(7): 1116–1128.
- Ruzin SE: Plant microtechnique and microscopy. New York: Oxford University Press; 1999.