

Amberized NMR Sample Tubes

Amberized NMR tubes offer photosensitive materials protection from visible and ultraviolet radiation. Typical optical transmittance values at 650nm to 300nm range from 0% to 50% (this region includes the visible spectrum). From 300nm to 190nm, in the UV region, the optical transmittance is virtually 0%, due primarily to the intrinsic opacity of glass to UV radiation.

Most borosilicate glass NMR tubes can be amberized, including all those from 3mm to 10mm O.D within our Select Series™ or Standard Series™ product lines. In addition, special purpose NMR tubes, such as valved tubes (having vacuum & reduced pressure, intermediate pressure or high pressure valve assemblies), screw-cap, constricted and medium or heavy wall NMR tubes amberize readily.

The coloration produced within the glass through the high temperature amberizing process arises from an exchange of metal atoms in the glass structure, resulting in a strong, permanent tint unaffected by exposure to chemicals or solvents and physical abrasion. Strongly heating amberized glass during subsequent glassblowing or forming operations can, however, greatly weaken or destroy the amber color.

Unlike borosilicate glass NMR tubes, however, quartz NMR and EPR tubes consist of pure silica, and so cannot be amberized, because quartz contains none of the readily displaced metallic elements normally added when manufacturing glass from silica sand.



Ordering Information

To order an item to be amberized, please state "Amberized" after the desired Item Number or in the product description. Please note that amberizing will incur an additional charge.