



Colour Grading according to the US Naval Stores Rosin Scale

Lovibond Rosin Scale Comparator 3000, AF 670



US Naval Stores Rosin Scale

Rosin is a natural, solid, resinous substance that comes from plants, in particular firs and pine trees. It varies in colour from yellow to reddish orange; the lighter colours are most highly valued since rosins are used in applications such as paper sizing (treating paper with a gelatinous solution to form a glazed or shiny surface) where any colouring of the paper is undesirable.

The US Naval Stores Rosin Scale specified in ASTM D 509 is the most widely used agreed method for assessing the colour quality of Rosin. Letters are assigned to each of the 15 colour standards in the scale - XC (lightest), XB, XA, X, WW, WG, N, M, K, I, H, G, F, E, D (darkest).

Lovibond Rosin Scale Comparator 3000

The Lovibond Rosin Scale Comparator 3000 is a 3-field instrument for visually determining the US Naval Stores Rosin colour of samples by direct comparison with coloured glass standards. It incorporates the 15 glass filters that make up the scale in a pair of discs:

Disc	Range
1	XC, XA, WW, N, K, H, F, D
2	XB, X, WG, M, I, G, E

With a 3-section field of view, the sample and two adjacent standards on the US Naval Stores Rosin Colour scale are viewed simultaneously, making it easier to achieve the optimum colour match. For rapid colour grading within predetermined colour limits, the glass standards can be set to the two limiting colours, making it easy to see if the sample is within tolerance. The tungsten halogen light source is colour corrected to CIE standard illuminant C, which guarantees constant lighting conditions for colour grading, day or night and whatever the ambient lighting.

Principle of Operation

The sample is poured into the Rosin cell supplied and placed in the sample chamber. The sample is viewed through a prism which brings the sample and the colour standards into adjoining fields of view. The two discs containing the colour standards are rotated by turning the control knobs on the front of the comparator until the colour of the sample falls between two standards which are 1 US Naval Stores Rosin Colour unit apart, or until it exactly matches one of the standards. The reading given directly as Naval Stores Rosin Colour is then taken from the scale on the control knobs. This method is not specified in the official method, ASTM D 509, but will give equivalent results.

Technical Specification

Measuring principle	Visual comparison with coloured glass standards
Mode	Transmittance
Viewing system	Prismatic with integral blue filter for light standardisation
Light source	Tungsten halogen lamp, 12 Volt, 20 Watt
Illuminant	C
Power pack	12 Volt ac, switchable to suit 220/110 Volt supply
Approvals	CE
Instrument housing	Fabricated mild steel
Dimensions	Width 235 mm, depth 245 mm, height 90 mm
Weight	4.9 kg

The Lovibond Rosin Scale Comparator 3000 is supplied with a special holder for rosin samples, which is designed to recreate the measuring conditions experienced with the Rosin cubes. This is a metal-sided cell with glass ends.

Accessories

Certificate of Conformity
Rosin Cell 7/8 p path length (Order Code 30 29 80)
Tungsten halogen lamp, 12 Volt, 20 Watt (Order Code 12 23 40)

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