



# Colour Grading according to the FAC Colour Scale (AOCS Cc 13a)

## Lovibond FAC Comparator 3000, AF 229



### FAC Colour Scale

The FAC Colour scale as specified in AOCS Official Method Cc 13a-43 is a single number colour scale that is approved by the Fats Analysis Committee of the American Oil Chemists Society for grading dark coloured oils, fats and tallow. It includes 26 colour standards divided into 5 groups: Scale 1 (1, 3, 5, 7, 9) for lighter coloured fats; Scale 2 (11, 11A, 11B, 11C) predominantly for yellow fats; Scale 3 (13, 15, 17, 19) for dark fats (red cast); Scale 4 (21, 23, 25, 27, 29) for very dark fats, predominantly green; Scale 5 (31, 33, 35, 37, 39, 41, 43, 45) for very dark fats, predominantly red.

### Lovibond FAC Comparator 3000, AF 229

The Lovibond FAC Comparator 3000 is a 3-field instrument for visually determining the FAC Colour of samples by direct comparison with coloured glass standards. The FAC colour standards that make up the scale are arranged in two pairs of discs as follows.

Disc	Position	Colour Standards
4/32A	left hand	1, 5, 9, 11A, 11B, 11C, 13, 17, 21
4/32B	right hand	3, 7, 11, 11A, 11B, 11C, 15, 19, 23
4/32C	left hand	25, 29, 33, 37, 41, 45
4/32D	right hand	27, 31, 35, 39, 43

The comparator is designed so that the pairs of discs can be easily changed over. With a 3-section field of view, the sample and two adjacent standards on the FAC 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, whatever the ambient lighting.

### Principle of Operation

The sample is poured into a 10.65 mm diameter test tube and placed in the sample hole in the comparator. The sample is viewed through a prism that brings the sample and the colour standards into adjoining fields of view. Using the relevant pair of discs, turn the control knobs on the front of the comparator until the colour of the sample falls between two standards, or until it exactly matches one of the standards. The reading given, directly as FAC Colour, is then taken from the scale on the instrument.

### 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 FAC Comparator 3000 is supplied with a single test tube of 10.65 mm diameter.

### Accessories

Certificate of Conformity confirming that the glass standards conform to the requirements of AOCS Cc 13a  
Test tube 10.65 mm diameter, AF 228/T (Order Code 35 22 80)  
Tungsten halogen lamp, 12 Volt, 20 Watt (Order Code 12 23 40)

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