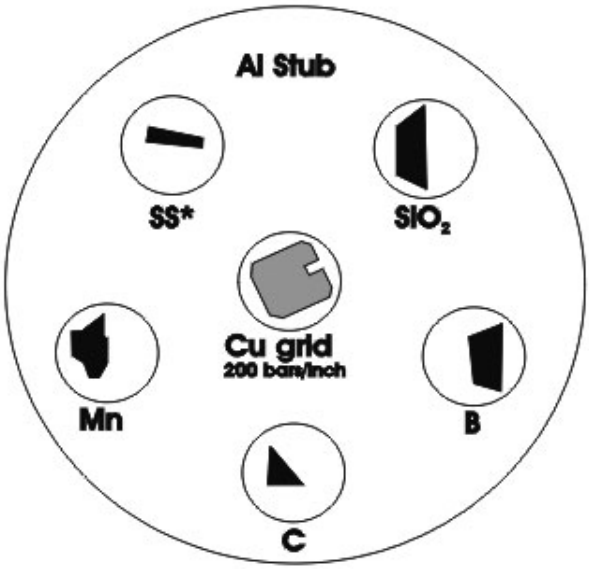
TED PELLA, INC.
Microscopy Products for Science and Industry

Certificate of Suitability for Purpose

PELCO® XCS-6 EDS Calibration Standard

Product Number 659-6



Purpose of standard: Calibration and testing of energy-dispersive X-ray systems and backscattered electron detectors on Scanning Electron Microscopes.

Number of reference standards: 6

Composition and use of standard:

1) NIST-certified SRM 1155 stainless steel – standard to test EDS quantitative analysis

C - 0.044%; Si - 0.509%; P - 0.02%; Mo - 2.38%; S - 0.016%; V - 0.047%;

Cr - 18.45%; Mn - 1.64%; Fe - 64.345%; Ni - 12.26%; Co - 0.12%; Cu - 0.169% (wt%)

2) Silicon dioxide (fused pure silica >99.9% pure – Spectrosil or Q&S), (Carbon coated) – to test EDS oxygen sensitivity

3) Manganese metal (J&M >99.9% metals basis purity) – to be used to calibrate detector resolution (may contain oxide inclusions)

4) Boron metal (Alfa Ventron >99.5% metals basis purity) – to be used for light element detector testing

5) Carbon (glassy, >99.9% Sigri Electrographit GmbH)) – to be used for light element detector testing

6) Copper grid (3.05 mm diameter 200 mesh) – to be used alignment device and for EDS calibration.

These materials are mounted and embedded with silver-loaded epoxy cement in a 12.7 mm diameter aluminum pin stub and polished to 1 µm finish. The aluminum used to make the stub is free-machining grade and may contain alloying inclusions of Cu/Bi/Pb.

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P.O. Box 492477, Redding, CA 96049-2477, U.S.A.
Telephone: 530-243-2200; 800-237-3526 (U.S.A. or Canada) • FAX: 530-243-3761
Email: sales@tedpella.com • Web Site: http://www.tedpella.com