Magnification Standard Recertification Recommendations.

Geller MicroÅnalytical magnification standards can be cleaned and recertified to assure continued use as a traceable standard. Most quality systems require periodic recertification of standards, when possible to meet the quality guidelines expressed by ISO 10012:2003, ISO 17025, ISO 9000, ANSI/NCSL Z-540-1 or other quality systems.

The recertification frequency is a function of at least two factors. One is how the standard is used and the company's quality control procedures. If its use degrades the standard in any way (i.e. contamination from electron beam scanning, accumulation of environmental debris or physical damage from handling) cleaning and recertification is necessary to insure the standard is within specification. Many companies closely track and monitor the performance of their standards and the associated test and measurement equipment using working standards (a good working standard for our MRS is a not traceable MRS). Second, it is generally the quality control department that determines the recertification frequency. If working standards are not used we strongly suggest calibration intervals of one year.

In our experience almost all magnification standards sent for recertification need cleaning and few have been damaged such that they can no longer be used.

ISO 10012:2003 gives guidance on this subject. Below is an excerpt. The standard can be purchased at www.ISO.org.

ISO 10012:2003
7.1.2 Intervals between metrological confirmation
The methods used to determine or change the intervals between metrological confirmation shall be described in documented procedures. These intervals shall be reviewed and adjusted when necessary to ensure continuous compliance with the specified metrological requirements.

Guidance
Data obtained from calibration and metrological confirmation histories, and advancing knowledge and technology, may be used for determining intervals between metrological confirmation. Records obtained using statistical process control techniques for measurements can be useful in determining whether or not to modify metrological confirmation intervals.
The calibration interval may be equal to the metrological confirmation interval (see OIML D10).

Each time nonconforming measuring equipment is repaired, adjusted or modified, the interval for its metrological confirmation shall be reviewed.

Joseph D. Geller

President
Geller MicroÅnalytical Lab., Inc.
www.GellerMicro.com