

DISCUSSION

Authors: Kaufman

Herman Kröckel: What is meant more precisely by the term *evaluation procedure/evaluator* in the guideline E49.05 "Standard Database Description"?

Gil Kaufman (author's response): The terms *evaluation* and *evaluator* are used in this document in the context defined by ASTM Subcommittee E49.03 in reference to any of several systematic reviews of data or an entire database to establish the consistency and quality of values. In this sense it encompasses the most specific types of evaluation, called *validation* (review to establish conformity with standard methods of measurement) and *certification* (review to establish applicability for specific purposes such as design). It also encompasses checks of consistency with theory or with previously generated data, statistical or parametric analyses and identification of outliers.

Only the broadest category is used in the database description format, with the intent (as defined by examples) for builders of such descriptions to specify the type of evaluation carried out and by whom it was carried out.

Carleton Sperati: The concern I have is with the proper use of the terms *certification* and *validation* according to my understanding of your definitions. Regularly I am faced with the question of an organisation *certifying* or being asked to *certify* that a material meets the requirements of standard ASTM materials specifications. Is the company a *responsible body* in your definition? Is the activity *certification* or *validation* or are these Humpty Dumpty terms?

Gil Kaufman (author's response): As noted earlier, the use of the terms *validation* and *certification* in this context is limited to their application for the judgement of data quality, as defined by ASTM Subcommittee E49.03, and not in any sense to the *validation* and *certification* for specific applications. In the latter case, the means of *validation* and *certification* are different, and the organisation doing the *validation* or *certification* is usually determined by a purchase agreement or contract of some kind.

Anthony Barrett: Briefly, in the context of data, *evaluation* is to do with the basic integrity of the data, *validation* with their suitability for application and *certification* with their acceptability for specific applications (often under contractual conditions). These concepts are underwritten by everyday usage, as recorded for example in the Oxford and Webster dictionaries.

Gil Kaufman (author's response): I wholeheartedly endorse Dr Barrett's concise delineation of the three terms. The only other point to be noted is that the term *evaluation* is often used as the broader term, encompassing all types of systematic reviews and assessments of data, with *validation* and *certification* being the most precisely and formally established types of evaluation. This, it seems to me, is fully consistent with Dr Barrett's delineation, as *validation* and *certification* provide specific measures of integrity

for specific purposes.

Tom Barry: In many countries a central body (NAMAS in the UK) has been established with the authority to *accredit* organisations to undertake and certify the results of certain tests, measurements and other procedures. Accreditation is simply the authoritative recognition of the technical competence of a laboratory to perform specific objective tests or measurements and to issue certificates or reports in which the results are reported.