ANSI/SLAS Microplate Standards

We often talk about the ANSI/SLAS (or SBS) footprint when describing racks, workdecks, plates, and more. Here is information about what that means and how to find the actual dimensional standards. We use these standards for microplates and tube racks.

- **DEFINITIONS**
  - **SBS** - Society for Biomolecular Screening (no longer in existence)
  - **SLAS** - The Society for Laboratory Automation and Screening
  - **ANSI** - American National Standards Institute, Inc.
  - **ASME** - AMerican Society of Mechanical Engineers
- SBS identified in 1995 a need for clearly defined dimensional standards for microplates as it became an essential tool in drug discovery.
  - In 1999 ListServ was started to be the working committee for industry standards. It was made up of 100+ members of corporations, education and government institutions from over 15 nations.
  - In 2010, SBS merged with ALA (Association for Laboratory Automation) to form SLAS, therefore it no longer exists.
- The proper way to annotate the dimensions standard has changed over the years. SLAS now sets the standards for microplate development through an advisory committee (as directed by ANSI) comprised of a balanced representation of manufacturers of microplates, manufacturers of instruments that utilize microplates, industrial and academic users of microplates, and those with a general interest but do not fit in the previous categories.
  - There are 5 standards they maintain. Only the first one applies to how we talk about footprint in our spec sheets.
    - ANSI SLAS 1-2004 (R2012): Footprint Dimensions (last updated January 9, 2004, reaffirmed in 2017 and 2021)
    - ANSI SLAS 2-2004 (R2012): Height Dimensions (last updated January 9, 2004, reaffirmed in 2017 and 2021)
    - ANSI SLAS 3-2004 (R2012): Bottom Outside Flange Dimensions (last updated January 9, 2004, reaffirmed in 2017 and 2021)
    - ANSI SLAS 4-2004 (R2012): Well Positions (last updated January 9, 2004, reaffirmed in 2017 and 2021)
    - ANSI SLAS 6-2012: Well Bottom Elevation (last updated April 09, 2009, reaffirmed in 2017 and 2021)
- **Referring to the ANSI/SLAS Microplate Standards in an advertisement, product release or abstract?** Because SLAS is not a standardizing organization but a society that provides a working group the ability and platform to standardize along with ANSI, the standards must be referenced as follows:
  - ANSI/SLAS 1-2004: Microplates — Footprint Dimensions
  - ANSI/SLAS 2-2004: Microplates — Height Dimensions
  - ANSI/SLAS 3-2004: Microplates — Bottom Outside Flange Dimensions
  - ANSI/SLAS 4-2004: Microplates — Well Positions
  - ANSI/SLAS 6-2012: Microplates — Well Bottom Elevation (Either singularly, or as a whole)
- Note that in dire circumstances where spacing is a major issue, the only other verbiage is allowed: Meets Standards ANSI/SLAS 1-2004

For more information: https://www.slas.org/education/ansi-slas-microplate-standards/

Revision History

Version:	Change:	Effective Date:	Approved by:
A	New	MAY-19-2023	Executive Team