### Standardization Chart

**2009**
NIST SRM 972
- Developed by National Institute Standards and Technology
- Four serum pools
- Not suitable for immunoassay due to matrix effect.

**March 2010**
NIST SRM 2972
- Developed by Prof. Linda Thein Pont from Ghent University and NIST
- 25(OH)D2 & 25(OH)D3 in ethanol
- Certified values in mass fraction (ng/g) and concentration (nmol/L)

**November 2010**
Vitamin D Standardization Program (VDSP)
- Collaboration between Centers for Disease Control and Prevention (CDC), NIST and Ghent University Belgium
- Goal to promote 25(OH)D measurements that are comparable over time, location, and laboratory method
- Four quarterly challenges with blinded concentrations for analysis are used for performance (bias and imprecision) assessment
- A laboratory is considered standardized/certified when the observed bias is within the predefined limits
- Certification is valid for one year and needs to be renewed on an annual basis