When starting your review, begin by asking yourself the following questions:

What mean value should my laboratory obtain for this control?

What SD or CV do most laboratories achieve with this method?

SDI (Standard Deviation Index, a.k.a**. z-score**) – the calculated value that indicates the number of SD units of each result from the group's mean; describes the bias of a method in units of SD. SDI is expressed as either a positive or negative value, indicating whether your result is above or below the group's mean. For inter-laboratory comparison reports, the SDI is a statistic that indicates the relationship between your mean value and the results reported by your group.

$$\text{SDI = (lab mean – group mean)/group SD}$$

CVI(Coefficient of Variation Index, a.k.a CVR) – the comparison or ratio of the laboratory's CV to the group's CV.

$$\text{CVI = lab CV/group CV}$$

N – the number of participating laboratories identified in the report

SDI	
0	Your laboratory's mean value is the same as the group, no bias
± 1.0	Acceptable performance when compared to your group
± 1.0 to 1.9	Problem may exist, laboratory should investigate problem with bias
± 2.0 or greater	Troubleshoot bias problem and perform corrective action

CVI	
< 1.0	Indicates for a specific control the imprecision is less than the group's average imprecision
1.0	Indicates for a specific control the imprecision is the same as the group's average imprecision
> 1.0	Indicates for a specific control the imprecision is greater than the group's average imprecision
> 1.5	Troubleshoot imprecision problem and perform corrective action

In addition to the SDI and CVI, inter-laboratory reports often include:

1. Your month's mean, SD, CV, and number of measurements involved.
2. Cumulative or lot-to-date (LTD) laboratory mean, SD, CV, and the number of measurements involved.
3. This month's group mean, SD, CV, and number of measurements involved.
4. Cumulative or lot-to-date (LTD) group mean, SD, CV, and the number of measurements involved.