**Accuracy (Standards)**

* **Mean Accuracy:** 99.97%
* **Min Accuracy:** 92.81%
* **Max Accuracy:** 107.78%

Excellent accuracy: all standard concentrations were within ±10% of their expected values.

**Precision (Replicate Consistency)**

* **Mean %CV:** 15.11%
* **Best %CV:** 0.00%
* **Worst %CV:** 82.00%

⚠️ The mean is at the **upper limit** of acceptability for ELISA assays (generally <15%). While some replicates are very tight, others are highly variable and should be flagged for pipetting or sample issues.

**TC Recovery Results**

* **Valid Recovery Pairs:** 7
* **Mean Recovery:** **−45.85%**
* **Minimum Recovery:** −118.49%
* **Maximum Recovery:** **94.51%**

Even with corrected sample matching and spike assumptions:

* Most recoveries are still **negative or very low**, meaning the spiked samples show **no increase**, or even a **lower concentration** than unspiked.

**Possible Reasons:**

* **Spike degradation** or improper mixing
* **Sample loss** in spiked tubes
* **Matrix effect** suppressing cortisol detection in spiked samples
* **Assay variability**, especially if precision is poor in those wells

**TB Samples (Only Neat Sample Spiked, Then Diluted)**

* **Mean Recovery:** **+20.37%**
* **Minimum Recovery:** −70.61%
* **Maximum Recovery:** +278.66%

**🧾 Summary**

| **Condition** | **Spiking Strategy** | **Mean Recovery** | **Interpretation** |
| --- | --- | --- | --- |
| **TB** | Spike before dilution | **+20.4%** | Incomplete but partially effective |
| **TC** | Spike after dilution (all) | **−45.9%** | Poor spike retention or detection |

🟡 Mixed performance: while some recovery values are acceptable, others show over- or underestimation. The high variability suggests **incomplete mixing** or **non-linear dilution effects**.