Difference between :
ATP 2nd Generation   and   ATP 1st Generation

ATP LuminUltra 2nd generation vs. 1st generation

LuminUltra ATP 2nd Generation

1. Large sample volume gives **more representative sample** (50mL)

2. Strong lysing agent achieves complete cell rupture to **release 100% of ATP**

3. Has steps to **remove interferences**

4. Measures ATP from **live bacteria** separate from dead (Intracellular)

5. Has **ATP calibration standard**, results in pg/ATP /mL. Results are comparable independently of luminometer used

6. ATP standard calibration compensates for any natural deterioration of luciferase over time

7. **Fully quantitative, accurate results, highly sensitive** (at least 10x more sensitive)

ATP 1st Generation pen-style

1. Small sample volume gives **un-representative sample** (50-100 ul)

2. Weak lysing agent necessary since it is mixed with luminase in next step, **incomplete ATP extraction**

3. **No interference removal**

4. Measures both **live and dead bacteria together**

5. Result in relative light units (RLU), **no ATP calibration**, results are luminometer dependent, reduced sensitivity

6. **No calibration** to compensate for natural luciferase deterioration over lifetime of pen

LUMINULTRA®
microbial monitoring

Method Comparison

Method	1st Gen	2nd Gen
Output	RLU	ATP concentration
Works on any luminometer?	NO	YES
Sensitivity	≥ 10pg ATP/mL	≤ 0.1pg ATP/mL
Extraction Efficiency	~30%	>95%
Subsample Size	≤ 100µL	1 to 100+ mL
# of Kits	1	6+