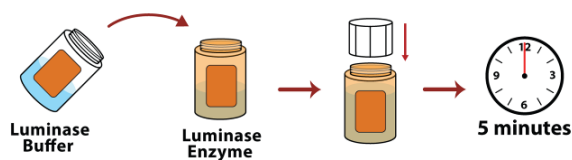


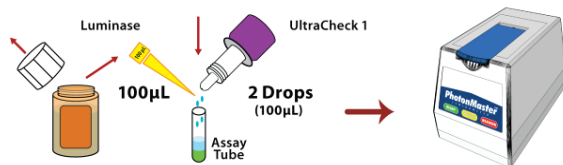
Rehydrating Luminase

- Gently mix the buffer and **Luminase** enzyme.
- Wait 5 minutes for solution to dissolve.



1. ULTRACHECK CALIBRATION (RLU_{ATP1})

- Hold the UltraCheck1 bottle vertical, add 2 drops (100µL) of **UltraCheck1** to a 12x55mm test tube.
- Pipet 100µL of **Luminase** into the tube.
- Swirl the tube and take reading within 10 seconds.

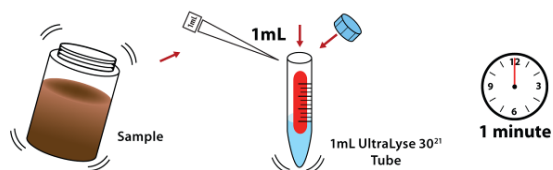


* If $RLU_{ATP1} \leq 5000$ rehydrate a new bottle of Luminase^W.

2. TOTAL ATP ANALYSIS (RLU_{tATP})

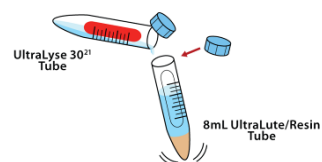
2.1 EXTRACTION

- Mix sample well.
- Using a wide-mouth pipet tip, add 1mL of sample to a **1mL UltraLyse 30²¹ (Extraction) Tube**.
- Cap, mix and allow 1 minute for incubation.



2.2 DILUTION

- Pour the **UltraLyse 30²¹ (Extraction) Tube** contents into a new 8mL UltraLute/Resin (Dilution) Tube.
- Transfer the mixture between the tubes at least 3 times. Cap, mix and allow beads to settle.



2.3 ASSAY

- Pipet 100µL of the **UltraLute/Resin (Dilution)** solution to a 12x55mm test tube.
- Use a new pipet tip to add 100µL of **Luminase**.
- Swirl the tube and take reading within 10 seconds.



Calculations

For automatic calculations, utilize **LuminUltra Cloud**.

1. Total ATP (**tATP**) – all ATP within a sample, including ATP from living cells and ATP that has been released from dead cells.

$$tATP (pg\ ATP/mL) = \frac{RLU_{tATP}}{RLU_{ATP1}} \times 10,000 (pg\ ATP / mL)$$

Application	Good Control (pg tATP/mL)	Preventive Action (pg tATP/mL)	Corrective Action (pg tATP/mL)
Process Water <i>Oxidizing Biocides</i>	<10	10 to 100	>100
Process Water <i>Non-Oxidizing Biocides or Non-Chemical Treatment*</i>	<100	100 to 1,000	>1,000
Papermaking Product Quality (Newsprint, Fine Papers)	<1,000	1,000 to 10,000	>10,000
Papermaking Odor Control (Paperboard, Recycle Water)	<10,000	10,000 to 100,000	>100,000

NOTE: These interpretation guidelines are designed for generic risk management guidance **only**. Users are encouraged to establish their own control ranges on which to base process decisions. LuminUltra and its affiliates do not accept any liability for any decision or assessment taken or made as a consequence of using this test kit.

Data Interpretation Guidelines