

Immediately, take tube holder out of luminometer. Remove MICRO TUBE from tube holder. Add one drop of **STANDARD** (blue cap) into MICRO TUBE, without inserting nozzle of dropper bottle, to avoid contact with MICRO TUBE.



Fix MICRO TUBE to tube holder and homogenize mix by tapping MICRO TUBE on a flat surface. Place tubeholder in the luminometer and press Enter. Write down R2 result (in RLU).

After fixing microtube onto holder, agitate solution for 15 secs to homogenize

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$$\text{Standard (in RLU/pg)} = \frac{R2 - R1}{1\ 000}$$
$$[\text{ATP}] \text{ (in pg/ml)} = \frac{R1}{\text{Standard} \times V}$$

Calculations (automatically done by the Excel table or the webapp):
R1 (in RLU): result of the sample.
R2 (in RLU): result after standardization, V (in ml): volume filtered.
[ATP]: picogram of ATP per milliliter.

ATP concentration is given in picogram of ATP per milliliter (pgATP/ml). It can be expressed in equivalent bacteria per milliliter (eq.bact./ml) based on following scientific consensus:
1 picogram ATP \approx 1 000 bacteria.
The Excel table and the webapp provided calculate these results.



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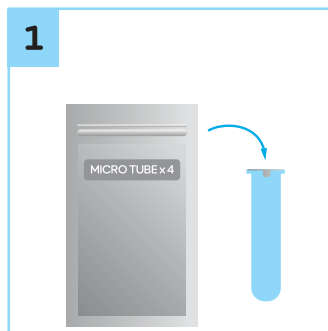


Quantification of total bacteria in Dental Unit Water by ATP-metry.

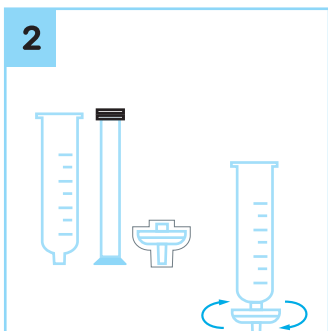
After running water lines on dental unit for 1 minute, collect approximately 50ml of water from the line(s), using the sampling container.

Reagents stored at room temperature and in the dark have a **3 month** shelf life.
To preserve 12 month shelf life, reagents should be refrigerated (2 - 8°C).

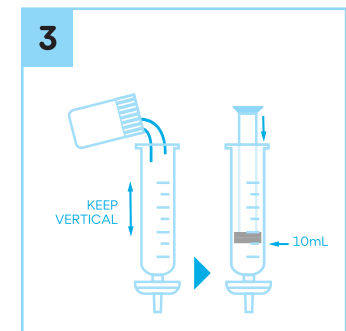
Take the dropper bottles of **extractant** and **standard** as well as a **micro tube** (lyophilised enzyme) from refrigerator. Items must be at room temperature (above 18°C) before use.
Prepare plastic consumables (sampling container, syringe and filter) and turn on luminometer.



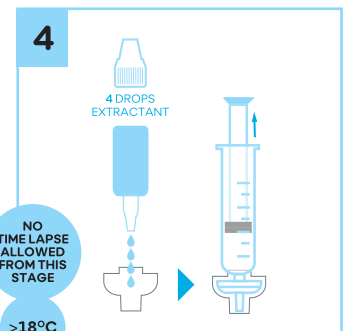
Take one MICRO TUBE from aluminum pack. Remove aluminium foil seal and place tube on a tube rack for support.



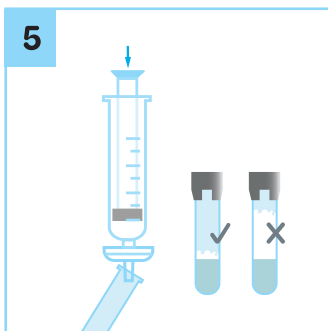
Remove syringe piston and place carefully, avoid touching black plunger. Open filter packaging (do not discard cup, this will be needed in step 4). Firmly screw syringe onto filter.



Pour water sample into syringe. Write down exact volume (approx. 50ml) to be analysed. Filter vertically water sample until you feel resistance. Stop immediately to avoid drying filter (with 10mL of air remaining).



Using cup from filter packaging, place 4 drops of **EXTRACTANT** (white cap), then place filter tip at bottom of cup to draw up reagents. Maintain upward pressure on syringe.



With firm pressure push liquid from syringe into MICRO TUBE until white foam appears. Stop pressure as soon as foam appears to avoid creating «stopper» in upper part of tube.



After fixing microtube onto holder, agitate solution for 15 secs to homogenize