



QG21TM Fast Microbiological test kit for electrodeposing coating, Slurries

MEASUREMENT OF TOTAL FLORA BY ATP G2

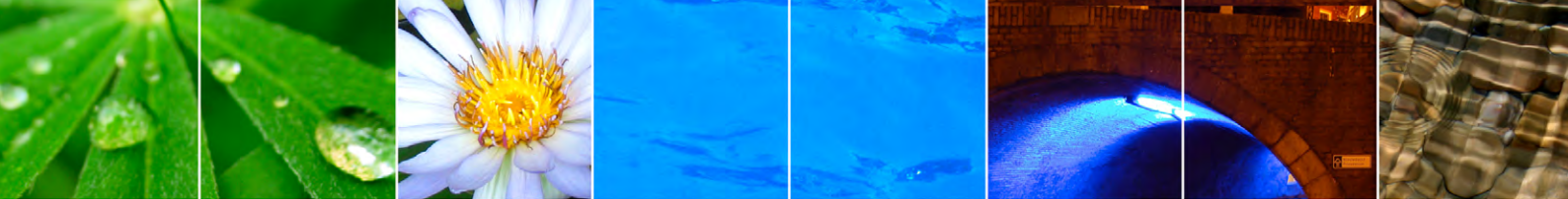
APPLICATIONS

- Process water
- Cataphoresis baths
- Slurries
- White waters from pulp and paper industry
- Biocides efficiency assessment
- Washing process waters



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WHAT DOES ATP 2G

The **QG211 G2 refill kit** – 2nd generation ATP-metry – is the only one allowing **interference-free** quantification of all living microorganisms in samples as complex as **chemical products heavily loaded in total suspended solids (TSS)** such as industrial process water.

It's a **Total Flora indicator**. It accounts for all living organisms present, isn't influenced by inorganic particulates, provides accurate bacteria counts, and detects bacteria considered to be unculturable. Adenosine triphosphate (ATP) is the energy source of any living organisms. ATP G2 analysis is an **effective tool in monitoring Microorganisms in water** and ATP testing detects **all metabolically active cells** in the sample. These kits are new alternative methods from culture plate counting, for more reactivity.

TECHNOLOGY

Adenosine Triphosphate (ATP) is the main energy carrier for all living cells. Its concentration is measured by the **QG211** kit via a reaction of bioluminescence: ATP, in contact with a complex of luciferin/luciferase, reacts to produce light measured by a luminometer. Results delivered in RLU are converted in pg ATP/mL or in Equivalent Microorganisms/mL using a **standard ATP solution, UltraCheck™ 1**, in order to provide reliable quantitative results over time.

The QG211 kit measures the following parameters in complex chemical samples:

- **Total ATP (tATP™)** which is the sum of intracellular and extracellular ATP.
- **Extracellular ATP or dissolved ATP (dATP™)** which is ATP present outside living cells and rejected by dead microorganisms.

From these two analyses, the two following parameters can be calculated:

- **Intracellular ATP (cATP™)** which is ATP contained within living microorganisms, directly linked to their concentration: $cATP = tATP - dATP$.
- **Biomass stress index (BSI™)** which represents the microorganisms stress or mortality $BSI (\%) = dATP/tATP$.

RECOMMENDATIONS

The video demonstrations, material safety data sheets (MSDS) and more information about applications of the QG211 test kit are available on the internet website www.aqua-tools.com.

KEY BENEFITS

Monitoring microbial contamination in industrial water loaded in suspended solids enables to:

- control and handle microbial contamination in real-time from raw material to finished product,
- early detect and prevent related damages such as degradation of finished products,
- verify, optimize, validate and monitor cleaning, rinsing and disinfection procedures effectiveness,
- carry out in real time quality controls,
- localize critical zones for bacteria proliferation and identify the origins of microbial contamination,
- reduce the number of time consuming culture analyses.

ADDED VALUE OF ATP G2

- **Faster measure**
- More representative Sample from 1 up to 100 ml
- A stronger Lysis solution in order to extract 99.99 % of microbial ATP
- Chemical reagent to minimize inhibitor of bioluminescence
- Quantification of any microorganisms
- Faster, economic analysis – excellent alternative tool versus plate count

CREATE YOUR MicrobialBoxTool

Reference method as culture plate count for water/fluid microbial control are directly link to the operator appreciation and quality of culture media used - variation of CFU count are more than 30 % for the same of culture media produced by different companies. This means that **you can underestimate true level of microorganisms** in your sample – Microorganisms slow growing or **injured active** cells will be missed by the operator. Underestimation of microbial contamination could lead you to unappropriated and non-efficiency action plans.

LUMINOMETER

