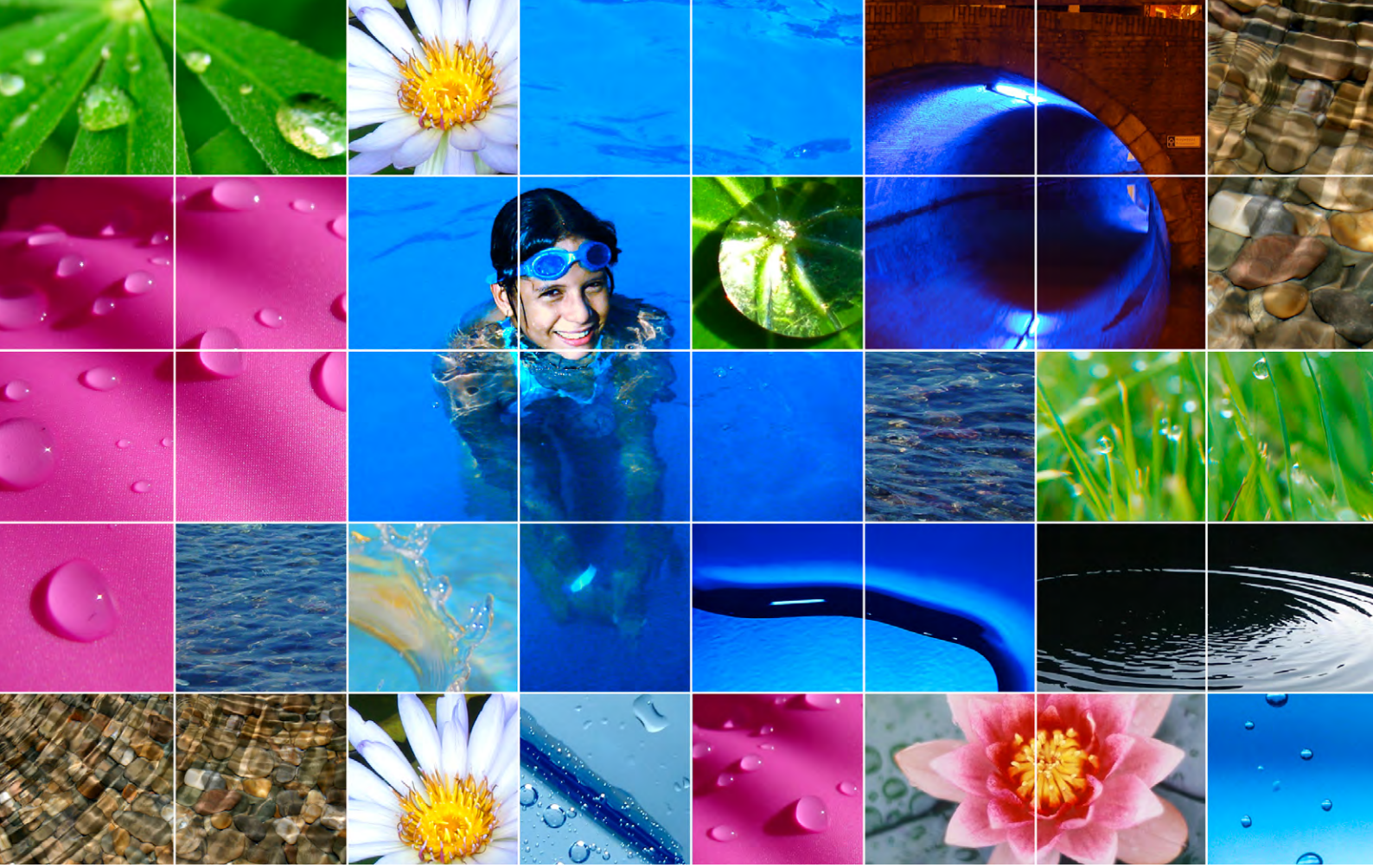

QG21S™
Fast Microbiological test kit for Paint product

MEASUREMENT OF TOTAL FLORA BY ATP G2

APPLICATIONS

- → Polymers, Latex
- → Industrial mixtures
- → Additives
- → Paints
- → Glue
- → Adhesives

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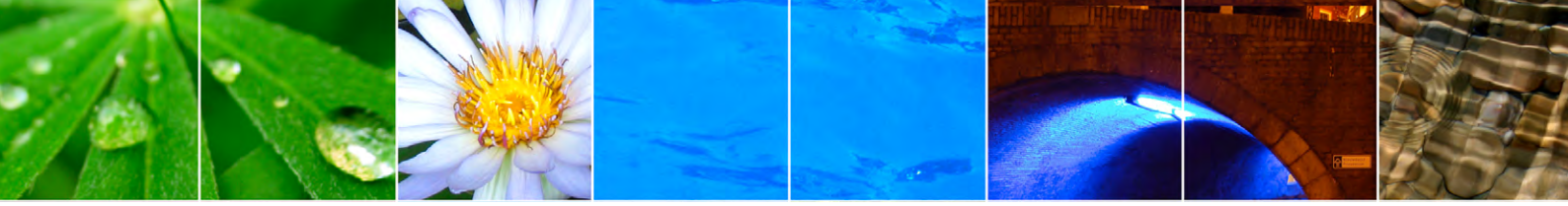

WHAT DOES ATP 2G

The **QG21S 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)**. It directly measures the concentration and health of microorganisms in **paints, adhesives, coatings, additives and industrial mixtures**.

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 5ATP) 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 **QG21S** 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 QG21S kit measures the following parameters in complex chemical samples:

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

From these measurements, the following monitoring parameters are calculated:

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

QG21S test kits are available in two formats:

- **QG21S Standard** (QG21S) provides materials to perform 50 analyses each of tATP and dATP. This provides the most accurate indication of living microorganisms via cATP and allows computation of the BSI to assess microbial population health.
- QG21S tATP only (QG21St™) provides materials to perform 100 analyses of tATP. Use this kit when no differentiation between living and dead microbes is required.

RECOMMENDATIONS

The video demonstrations, material safety data sheets (MSDS) and more information about applications of the QG21S test kit are available on the internet website www.aqua-tools.com.

KEY BENEFITS

Products such as **paints, coatings, adhesives, industrial mixtures** and additives, are all prone to significant **biodegradation issues if microbial growth** is not under control. The consequences of contaminated product can be severe (i.e. product recalls, lost time due to product re-working requirements, brand image damages, etc.). The QG21S kit allows monitoring microbial contamination in samples from chemical products industry:

- **Control a**nd handle microbial contamination in real-time from raw material to finished products
- Early detect and prevent related damages such as degradation of finished products
- Assess in real-time the effectiveness of Biocide action
- Reduce the **number of time consuming culture** analyses

ADDED VALUE OF ATP G2

- **F**aster 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 microorganims
- Faster, economic analysis – excellent alternative tool versus plate count
- Results in **pg ATP/mL** or in **Equivalent Microorganisms/mL**

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

QG21S and PhotonMaster are a trademark from LuminUltra (Canada)

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