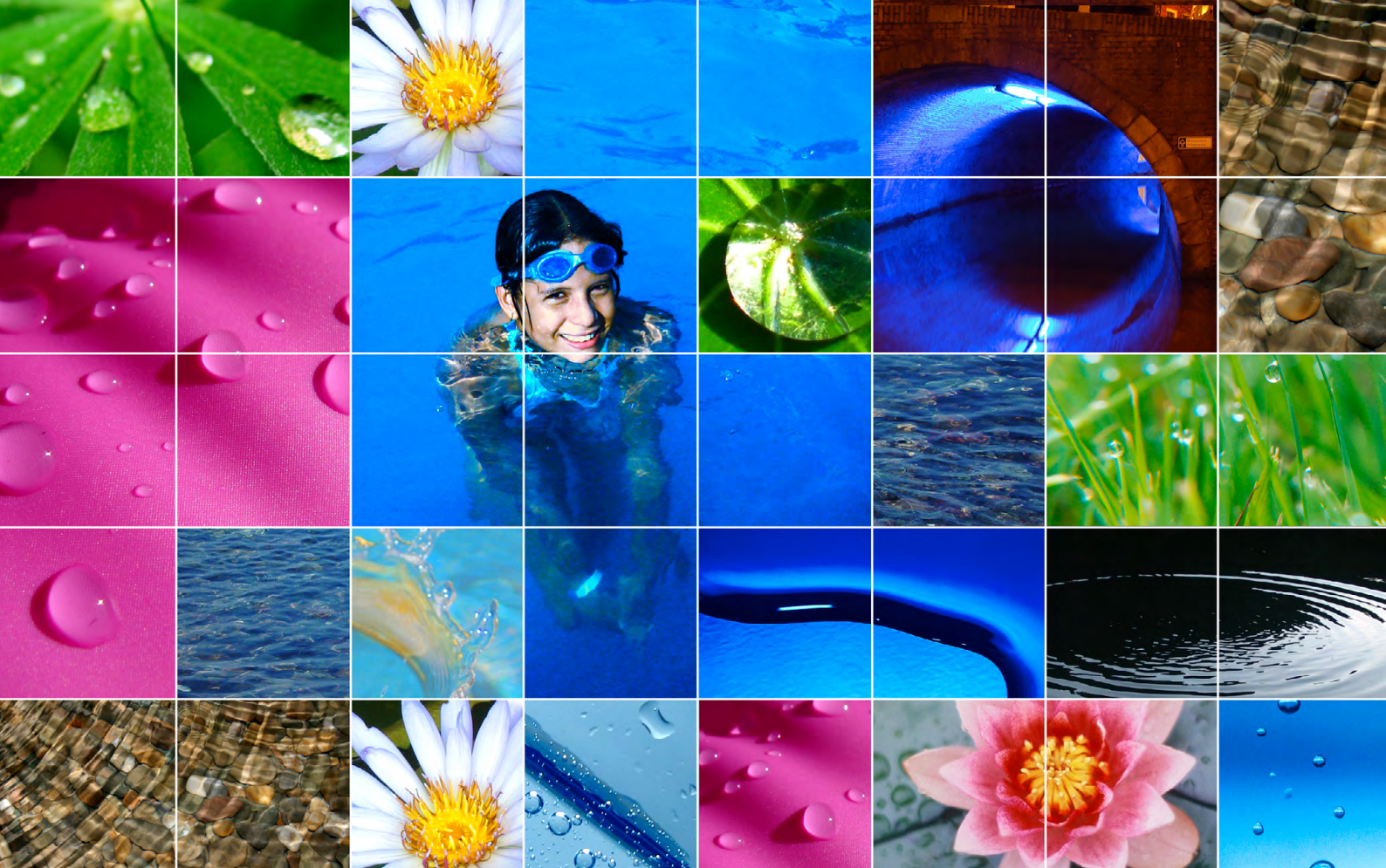




QGO-M™ Fast Microbiological Test Kit

MEASUREMENT OF MICROBIAL CONCENTRATION BY ATP 2G

APPLICATIONS

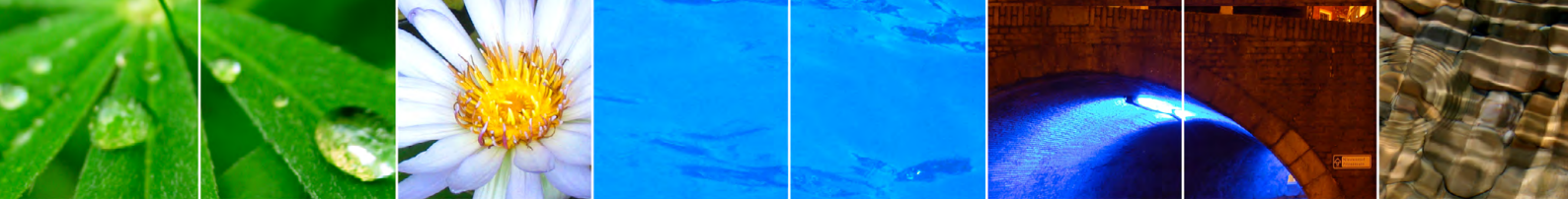
- Petroleum
- Fuels & biofuels
- Metalworking fluids

- Lubricants
- Oils



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WHAT DOES ATP 2G?

QGO-M refill Kit is being validated as **ASTM** standard **E2694** for control of **metalworking fluids and lubricants**, and ASTM standard D7687-11 for **fuel and biofuel** application.

It's a **Microbial 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. Thus, measuring the concentration of ATP in living cells enables to quantify the microbial contamination in a sample. The **QGO-M kit** – 2nd generation ATP-metry – allows measuring only intracellular ATP for quantifying living microorganisms in emulsions in 5 minutes. Living microorganisms are retained on a filter and organic compounds are washed off. Microorganisms are then lysed to release their ATP. ATP in contact with luciferin and luciferase reacts to produce photons measured by a luminometer. Results are expressed in RLU and then converted either in pg ATP/mL or Equivalent Microorganisms/mL using an external **standard calibrated ATP solution, Ultracheck™ 1**, to provide reliable quantitative results over time.

KEY BENEFITS

Monitoring microbial contamination in organic fluids enables to:

- control and handle microbial contamination in real-time, from raw material to finished product (ex. : from crude oil to refined fuel),
- early detect and prevent related damages (microbial corrosion, products and equipments degradations, clogging and fouling),
- verify, optimize, validate and monitor effectiveness of cleaning procedures,
- carry out in real time quality controls, in fuels, metalworking fluids and lubricants,
- localize critical zones for bacteria proliferation and identify the origins of microbial contamination,
- reduce the number of time-consuming culture analyses.

RECOMMENDATIONS

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

STRONG POINTS

- Quantification of microorganisms in hydrocarbons, metalworking fluids, lubricants, oil, fuels and biofuels
- Quick measurement (**3 minutes**)
- Fieldwork possible for more reactivity
- Quantification of all microorganisms
- Low priced analysis
- Results in **pg ATP/mL** or in **Equivalent Microorganisms/mL**

ADDED VALUE OF ATP 2G

- **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

