



LuminUltra Wastewater (QG21W™)

The LuminUltra Wastewater test kit (QG21W) is the key to unlocking a new level of control in your biological wastewater treatment plant! It provides the ability to measure the active biomass population, stress levels, and suspended solids activity. By isolating the living population and eliminating all interferences, the operator can maximize efficiency and stability in any treatment process to prevent upsets, manage toxicity, streamline operations, and save money!

This test kit uses two parallel analyses on each sample to determine the health and activity of the active biomass population in a wastewater sample, providing three valuable pieces of information:

- **Active Volatile Suspended Solids (AVSS)** – calculated from the cellular ATP contained in living microorganisms, this parameter represents the living biomass concentration. Once target thresholds for AVSS are established, AVSS results provide the ideal basis for operational stability, optimization, and continuous improvement of a wastewater treatment process.
- **Biomass Stress Index (BSI)** – represents the stress level experienced by the microbiological population. This quantity provides an early warning of impending process problems and stressful conditions (i.e. toxicity).
- **Active Biomass Ratio (ABR)** – represents the percentage of bioreactor solids that are active microorganisms, and is computed using the ratio of AVSS to TSS. Maximizing the ABR provides many benefits such as enhanced sludge quality and improved settling.

Looking for sludge bulking or attached growth measurement capabilities? The LuminUltra Wastewater Advanced (QG21Wa) test kit includes the above plus capabilities for two additional measurements:

- **Specific Floc-Bulking ATP (s-fbATP)** – represents the quantity of ATP from bulking floc relative to microorganisms. This measurement provides an early warning of bulking conditions, allowing operators to proactively mitigate bulking conditions in sedimentation processes.
- **Specific Attached-Growth ATP (s-agATP)** – is a measurement of the ratio of suspended to attached microorganisms in attached-growth processes. Higher fractions of suspended relative to attached microorganisms indicate sub-optimal process conditions.

Key Features:

- Gain tremendous insight into biomass quantity and quality:
 - *Living biomass concentration via Active Volatile Suspended Solids.*
 - *Biomass health via the Biomass Stress Index.*
 - *Total solids activity via Active Biomass Ratio.*
 - *Biomass bulking tendencies via Floc Bulking ATP.*
 - *Biomass attachment tendencies via Attached Growth ATP.*
- Results available in < 5 minutes.
- Detection range sufficiently broad to apply to raw wastewater, treated effluent, and concentrated sludge.
- All interferences such as solids, colour, residual chemical, and other characteristics inherent to sample matrices are mitigated.
- All materials are stable for two years at room temperature.*

*Luminase formulations, after rehydration, typically last 4-6 months if stored refrigerated.

This test kit is available in two formats. Choose the best format to suit your needs from the following descriptions:

- LuminUltra Wastewater (QG21W-50) Test Kit provides materials to perform 50 analyses each of Total ATP (or tATP: living plus dead biomass) and Dissolved ATP (or dATP: dead biomass only). This provides the most accurate indication of living microorganisms only via Cellular ATP and allows computation of the Biomass Stress Index to assess microbial population health.
- LuminUltra Wastewater Advanced (QG21Wa-25) Test Kit provides materials to perform 25 analyses each of Total ATP (or tATP: living plus dead biomass), Dissolved ATP (or dATP: dead biomass only), and fbATP (bulking floc) OR agATP (attached biomass).

Ask us for a business case for using LuminUltra's solutions to save your operation time and money at sales@luminultra.com.



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microbial monitoring