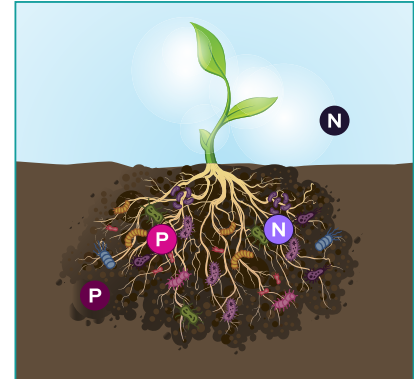


Harvesting Microbial Potential for Smarter Agriculture

The RhizoPlate™ series of microplates provides a targeted and easy-to-use solution for detecting, ranking, and monitoring **nitrogen-fixing & phosphate-solubilizing bacteria (NFB/PSB)** within the rhizosphere—two critical processes that support crops' nutritional requirements.

RhizoPlate P provides a 96-well microplate uniformly coated with insoluble inorganic phosphate, and pre-loaded with 30 carbon substrates in triplicate, selected to support the unique growth requirements of Phosphate Solubilizing Bacteria (PSB). Together with a phosphate-free inoculating fluid, this turnkey solution greatly simplifies interpretation of results.

RhizoPlate N is designed to measure the nitrogen fixation ability of soil bacteria. This 96-well microplate includes 30 nitrogen-free substrates in triplicate, selected specifically for their interactions with Nitrogen Fixing Bacteria (NFB). Together with a nitrogen-free inoculating fluid, this turnkey solution drastically accelerates analysis.



The rhizosphere is the narrow region of soil around the roots of the plant that governs nutrient acquisition and is influenced by microbes. RhizoPlates help you find bacteria that can provide nutrients directly and help reduce the use of sythetic nutrients that cause pollution.

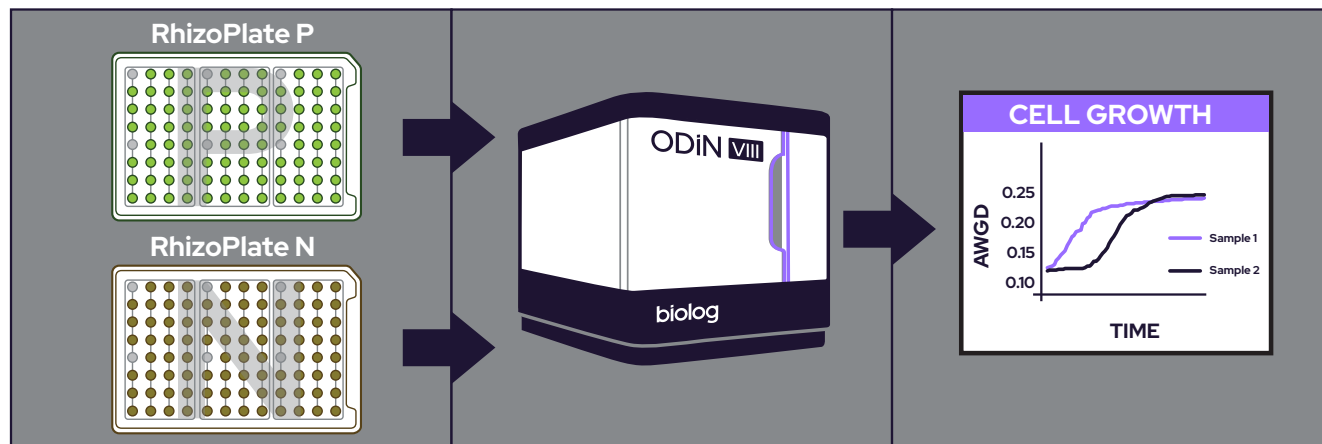
RhizoPlate Features

- **Advancing Sustainable Agriculture:** Simplifying Biostimulant product development to reduce use of synthetic fertilizers.
- **Comprehensive Analysis:** Select for and evaluate NFB/PSB capabilities from a wide variety of sample types: bacterial isolates, microbial communities, and complex soil samples.
- **Streamlined Relative Quantification:** Kinetic optical density (OD) measurements based on the resultant growth from utilization of atmospheric N₂ or inorganic phosphate are used to rapidly assess and compare the performance of NFB/PSB, which is ideal for strain screening and ranking.
- **Persistence Monitoring:** Track NFB/PSB in agricultural fields over time to guide biostimulant dosing.
- **Scalable Throughput:** Seamlessly integrates with the Odin™ platform for small-scale (Odin VIII) or higher-throughput (Odin L) screening operations, with powerful software for actionable insights.

Learn more



Simple Workflow



A soil sample, community, or isolate is plated in triplicate across the microplates' three identical sectors using their corresponding phosphate- or nitrogen-free IF.

The plate is transferred to the Odin instrument for incubation and kinetic OD₅₉₀ measurements, where cells must use insoluble phosphate or fix nitrogen to grow.

Average Well-Growth Development (AWGD) data, calculated by Odin software, is used to screen phosphate solubilization or nitrogen fixation performance across many samples easily.

Combined list of substrates

| | | | | |
|-----------------------------------|-------------|---------------------|---------------------|-----------------------------|
| 2,3-Butanediol | Acetic Acid | D-Mannitol | L-Arabinose | Maltose |
| Adonitol | | D-Mannose | L-Asparagine | myo-Inositol |
| Citric Acid | | D-Saccharic Acid | L-Aspartic Acid | Polysorbate 80 |
| D,L- α -Glycerol Phosphate | | D-Trehalose | L-Fucose | Propionic Acid |
| D,L-Lactic Acid | | Formic Acid | L-Glutamic Acid | Succinic Acid |
| D-Fructose | | Glucose-6-Phosphate | L-Histidine | Sucrose |
| D-Galactose | | Glycerol | L-Phenylalanine | Urocanic Acid |
| D-Galacturonic Acid | | Glycogen | L-Proline | α -D-Glucose |
| D-Gluconic Acid | | i-Erythritol | L-Pyroglutamic Acid | α -D-Lactose |
| D-Glucuronic Acid | | L-Alanine | L-Rhamnose | α -Keto-Valeric Acid |

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Biolog has the tools, services, and support to provide comprehensive cellular characterization and multi-omic identification for thousands of bacteria, yeast, and fungal species. Our products enable the growth and phenotypic profiling of microbial and mammalian cells for a wide range of applications, including pre-reduced media and gloveless chambers that support culturing organisms under strictly anaerobic conditions.

Learn more at [biolog.com](https://www.biolog.com) or email us at info@biolog.com