## Alfa Chemistry Starts to Supply Quaternary Phosphonium Compounds for Formulation of Disinfectants and Antiseptics

**New York City, New York May 11, 2022 (<u>Issuewire.com</u>) - Earlier this month, the New York-based chemical supplier Alfa Chemistry announces its decision to start providing <u>quaternary phosphonium</u> <u>compounds</u> (QPCs), which proves to be effective antimicrobial scaffolds with improved broad-spectrum activities compared to commercial Quaternary Ammonium Compounds (QACs).** 

As a key class of organophosphorus compounds, QPCs can be synthesized by routes involving nucleophilic phosphorus. With potent bioactivities, biscationic phosphonium compounds are viewed as the next-generation disinfectant molecules, arousing more future studies into the synthesis and biological investigation of this nascent antimicrobial class.

QPCs have gained considerable attention as catalysts in many chemical transformations and synthetic chemistry because of their unique chemical structure.

The chemical reactions that QPCs can be used:

- Wittig reaction
- Reduction reaction
- Friedel-Crafts-type reaction
- Other reactions

In addition to the role played in synthetic chemistry, QPCs were also evaluated as corrosion inhibitors with biocidal properties for controlling microbiologically influenced corrosion. Below are some of the QPCs provided by Alfa Chemistry:

Benzyltriphenylphosphonium chloride (cas 1100-88-5), butyltriphenylphosphonium chloride (cas 13371-17-0), benzyltriphenylphosphonium bromide (cas 1449-46-3), ethyltriphenylphosphonium bromide (cas 1530-32-1), allyltriphenylphosphonium bromide (1560-54-9), triphenylpropylphosphonium bromide (cas 15912-75-1), methyltriphenylphosphonium bromide (cas 1779-49-3), butyltriphenylphosphonium bromide (cas 1779-51-7), (4-carboxybutyl)triphenylphosphonium bromide (cas 17814-85-6), 3-carboxypropyl triphenyl phosphonium bromide (cas 17857-14-6), tetraphenylphosphonium chloride (cas 2001-45-8), tetra-n-octylphosphonium bromide (cas 23906-97-0), tetraphenylphosphonium bromide (cas 2751-90-8), ethyltriphenylphosphonium acetate (cas 35835-94-0), (methoxymethyl)triphenylphosphonium chloride (cas 4009-98-7), ethyltriphenylphosphonium iodide (cas 4736-60-1), (5-carboxypentyl)(triphenyl)phosphonium bromide (cas 50889-29-7), 2-carboxyethyl triphenyl phosphonium bromide (cas 51114-94-4), phosphorane, chloromethyltriphenyl- (cas 57283-72-4), triphenyl(propyl)phosphonium bromide (cas 6228-47-3), and more.

To learn more about Alfa Chemistry's offering of QPCs, please visit <a href="https://qacs.alfa-chemistry.com/products/quaternary-phosphonium-compounds-2544.html">https://qacs.alfa-chemistry.com/products/quaternary-phosphonium-compounds-2544.html</a>.

## **About Alfa Chemistry**

To better fulfill customers' expectations, Alfa Chemistry keeps expanding its product offering range. More types of chemicals and materials have been added during the past decade. Quaternary

ammonium compounds (QACs) are one of these popular chemicals with great market demand, especially in the current difficult times when the outbreak pandemic requires more use of disinfectants. As a matter of fact, QACs are active ingredients in over 200 disinfectants. Alfa Chemistry offers a wide array of QACs, including halide quaternary ammonium salts, acid radical quaternary ammonium salts, polyquaternium, and quaternary ammonium hydroxide, and quaternary phosphonium compounds.

## **Media Contact**

Tylor Keller

support@alfa-chemistry.com

+1 516 734 6573

New York, USA

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