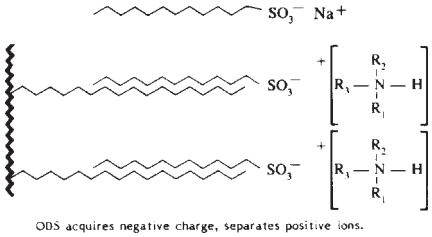
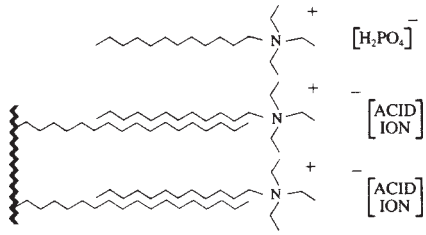
Regis Technologies Ion Pair Reagents and Buffers

Ion Pair HPLC greatly extends the applicability of HPLC by making the efficient octadecylsilyl columns amendable to use with ionized or ionizable samples.



ODS acquires negative charge, separates positive ions.



ODS acquires positive charge, separates negative ions.

Regis S-Series (for Cations)

The sulfonates are sodium salts that act as an anionic counterion for the separation and resolution of positively charged analytes.

The sulfonates are available as ion pair concentrates: premixed 0.5 M solutions of alkyl sulfonates. When diluted to 1 L with HPLC-grade water, a 10mL bottle forms a 0.005 M solution.

Description	Five 10mL Bottles Cat. No.	100mL Bottle Cat. No.
S5 Pentanesulfonate	**405025**	**405035**
S6 Hexanesulfonate	**405026**	**405036**
S7 Heptanesulfonate	**405027**	**405037**
S8 Octanesulfonate	**405028**	**405038**
S12 Dodecanesulfonate	**405021**	**405031**

Method Development Kit

S-Series 10mL of S (5, 6, 7, 8, and 12)	**405020**

Regis Q-Series (for Anions)

The Q-series is comprised of quaternary alkyltriethylamines that can be used for the resolution of negatively charged species. This unique set of cationic reagents was developed to complement the Sulfonate Series (S-series).

The Quaternary Alkyltriethylamines are available as ion pair concentrates: premixed 0.5 M solutions of alkyl amines. When diluted to 1 L with HPLC-grade water, a 10mL bottle forms a 0.005 M buffered solution.

Description	Five 10mL Bottles Cat. No.	100mL Bottle Cat. No.
Q5 Pentyl (TEA)	**404025**	**404035**
Q6 Hexyl (TEA)	**404026**	**404036**
Q7 Heptyl (TEA)	**404027**	**404037**
Q8 Octyl (TEA)	**404028**	**404038**
Q12 Dodecyl (TEA)	**404021**	**404031**

Method Development Kit

Description	Cat. No.
Q-Series 10mL of Q (5, 6, 7, 8, and 12)	**404020**

Bulk Ion Pair Reagents

For Cations

Cat. No.	Description	Grams
403025	1-Pentanesulfonate, sodium salt	25g
403125		100g
403026	1-Hexanesulfonate, sodium salt	25g
403126		100g
403027	1-Heptanesulfonate, sodium salt	25g
403127		100g
403028	1-Octanesulfonate, sodium salt	25g
403128		100g
403021	1-Dodecanesulfonate, sodium salt	5g
403022		25g

For Anions

680502	Tetrabutylammonium Phosphate *0.5M, pH 7.5*	10mL
680503	Tetrabutylammonium Phosphate *0.5M, pH 7.5*	500mL

Tech Tip:

Guidelines to developing a successful method using ion pair reagents:

- Select a column – endcapped ODS (octadecylsilyl) is most common.
- Use only HPLC-grade water and chromatography grade reagents in mobile phase preparation.
- Choose the mobile phase components and concentrations that give the best separation.
- If nonionic components are present in the sample, optimize the resolution prior to attempting ionic separations.
- Select the appropriate ion pair series to provide the necessary counterion. Use the Q-series for acidic compounds and the S-series for basic compounds.
- Through a process of elimination, choose the alkyl chain length which results in the best separation.
- Once the reagent has been selected, adjust the pH of the mobile phase to maximize resolution. Because slight modification of pH can profoundly effect retention and selectivity, make all adjustments in small increments and monitor carefully.
- Ideally, the ion pair reagent concentration in the mobile phase should be 0.005M. However, small adjustments in reagent concentration may increase retention slightly and optimize the separation.

REGIS® TECHNOLOGIES, INC.

For a complete list of Regis reagents, please contact Chrom Tech.