

Getting started using Strata™ Giga Tubes for Flash Analysis

	STRATA SI-1	STRATA SCX	STRATA NH ₂ & SAX
What compound class do you use?	Neutrals, acids and bases	Bases	Acids
What Flow Rate is appropriate? use within 33% of these values	12mL tubes: 10mL/min 20mL tubes: 14mL/min 60mL tubes: 28mL/min	12mL tubes: 10mL/min 20mL tubes: 14mL/min 60mL tubes: 28mL/min	12mL tubes: 10mL/min 20mL tubes: 14mL/min 60mL tubes: 28mL/min
How do you condition your cartridge?: use 1 column volume	Hexanes or nonpolar solvent	Same as sample solvent	Same as sample solvent
How do you select the proper tube dimension?	For difficult separations (similar R _f values by TLC), load no more than 1% by mass of the sorbent bed mass. (e.g. purify 50mg of crude material using a 5g or larger bed mass.) For separations where there is a large difference in R _f value by TLC, up to 5% loading can be reached (e.g. purify 250mg using a 5g sorbent).	Load no more than 1-5% by mass of the sorbent bed mass. (e.g. purify 50mg-250mg of crude material on a 5g sorbent mass.) Weak amines such as aromatic amines will be less loadable than strong amines.	Load no more than 1-5% by mass of the sorbent bed mass. (e.g. purify 50mg-250mg of crude material using a 5g bed mass). Weak acids will be less loadable than strong acids. Consider using SAX for weak acids.
What sample solvent should you use?	Preferably non-polar (e.g. hexanes). If a polar solvent is needed for solubility, use a larger tube and load less than 1% of the sorbent bed by mass with a gradient mobile phase.	Any -spike with 0.1% acetic acid to ensure pH is two units below pK _a	Any -spike with buffer to ensure pH = 7 to 7.8
When should you use an isocratic mobile phase?	Use the solvent system that gives R _f values between 0.15 and 0.35 on silica TLC plates.	Elute acids and neutrals with 1-3 column volumes of methanol. Elute all amines with 1-2 column volumes of 10% ammonia in methanol.	Elute acids and neutrals with 1-3 column volumes of methanol. Elute all acids with 1-2 column volumes of 10% ammonia in methanol or 5% formic acid in methanol (SAX).
When should you use a gradient mobile phase?	Take the solvent system that gives R _f values between 0.15 and 0.35 on silica TLC plates. Divide the amount of polar solvent in this mobile phase by 4. Run a gradient from this new value of polar solvent to 100% over 10 column columns.	Elute acidic and neutral compounds with 1-3 column volumes of methanol. Elute different amine classes with 2 column volumes of 0.1% ammonia in methanol, followed by 2 column volumes of 0.5% ammonia in methanol, followed by 2 column volumes of 2% ammonia in methanol, followed by 2 columns volumes of 10% ammonia in methanol	Elute amines and neutrals with 1-3 column volumes of methanol. Elute different acid classes with 2 column volumes of 0.1% formic acid in methanol, followed by 2 column volumes of 0.5% formic acid in methanol, followed by 2 column volumes of 5% formic acid in methanol. For NH ₂ cartridges, formic acid can be substituted with ammonia.
What is a recommended starting gradient?	Solvent A: hexanes + 0.1% diethylamine Solvent B: 80/20 dichloromethane/methanol + 0.1% diethylamine. Run a gradient from 100% A to 90% B over 10 column volumes.	As above.	As above.
What are common run times?	5 to 10 column volumes	5 to 10 column volumes	5 to 10 column volumes
What is a column volume equivalent in flash?	1 column volume (mL) = 2x mass of sorbent (g)	1 column volume (mL) = 2x mass of sorbent (g)	1 column volume (mL) = 2x mass of sorbent (g)

This method is designed as a convenient starting point for further investigation. Phenomenex makes no guarantee regarding the accuracy or completeness of the method.

