

## Aqueous Normal Phase ANP defined & compared to Reversed Phase & Normal Phase definitions HPLC

**Normal Phase ONP Chromatography** is defined as a chromatographic process that will increase the retention of a target compound as the mobile phase becomes less polar (a decrease in concentration of the most polar solvent, often water) conversely the compound has longest retention in a non-polar solvent such as 100% hexane.

**Reversed Phase RP Chromatography** is the opposite or the reverse; there is an increase in retention time of the target compounds as the mobile phase becomes more polar (increase concentration of the most polar solvent, often water).

**Aqueous Normal Phase ANP Chromatography** will be defined as a normal phase separation pattern using the reversed phase solvents, water and acetonitrile with added acid or base.

In ANP, the maximum retention time of target compounds can be achieved with up to 98% acetonitrile with a small (2%) aqueous component (*least polar solvent*) and as you increase the polar solvent content (*aqueous*), the retention reduces to a minimum when the mobile phase is at low concentrations of acetonitrile.

Here are links with more explanation about ANP than this article can provide. [What is Aqueous Normal Phase ANP](#) or [Wikipedia definition of ANP](#)



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