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Superiority of used HPLC over GC by Julia Roger

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Chromatography is carried out in laboratories to distinguish chemical compounds from other unidentified liquid sample. The sample is homogenously mixed with a solvent and is passed through a tube. The sample is strictly divided by the pull of the compound adjacent to the substance of the tube more precisely by the participating force whose polar and non-polar attraction differentiate between the sample and the solvent. The two types of chromatography widely used in recent times are gas chromatography (GC) and used high performance liquid chromatography (HPLC).

Gas chromatography vaporizes the tester substance and is processed along with the system with a help of an inert gas like helium. The separation is carried with higher efficiency using hydrogen gas. But most of the laboratories prevent themselves from using hydrogen as the gas is extremely inflammable and can cause major accidents. While the method of used hplc is utilized, the sample is essentially in liquid state. It is passed throughout the column by providing high pressures using different types of solvents like water, methanol or acetonitrile. These solvents are kept at different densities which actually causes the fluctuation of the pressures. Also, the stability of the sample is enhanced while it remains in liquid state.

The columns used in GC ha s extremely small diameters and their length ranges something between 10 to 45 meters. These columns are made of silica forming a coil shape and are ignited to a temperature of 250 Fahrenheit. The columns used in used HPLC are provided a thick metal casing external to its silica body. In GC, the sample is passed through the column after it is converted to steam heating it up to 400 Fahrenheit. In used hplc, the scientists get a much better chance to work with the sample as it stays at a more stable state.

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