

## 'Indispensable Chromatography'

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### 'Indispensable Chromatography'



The estimated Rs 1,300 crore strong chromatography market continues to hold a major chunk of total biosupplier market revenue. The market continues to grow at a rate of 20%. Dominated by High Performance Liquid Chromatography (HPLC), the chromatography market also includes the important sub-segments such as Liquid Chromatography (LC), Gas Chromatography (GC) and Ultra-high performance liquid chromatography (UHPLC). The Agilent Technologies and Waters equally control around 70% of the market, followed by Shimadzu and Thermo Fisher having strong presence in the segment. Few of the other significant players include the Daicel, GL Sciences, Grace, Machery Nagel, Merck, Phenomenex, Sigma Aldrich, Whatman, YMC etc. The overall analytical instruments market said to be close to Rs 6,000 crore by experts, has also showed consistent growth over a period of time.

The growth drivers for this market include the govt investments in academics, life science applications-'Omics', growth in generics and CROs and therapeutic conversion to new biological entities. While the life science applications in pharma biotech and environmental industries account for close to 80% of the market revenue, 10% each is shared by national laboratories and other government institutes.

The total HPLC market of India is estimated to be around 600 crore, witnessing a growth of over 15% for fiscal year 2011-12. The tremendous increase in the number of quality control, method development, research and drug discovery laboratories has been the driving force for the HPLC market. Another sub segment, Ultra-high-pressure liquid chromatography (UHPLC) due to its advantages in chromatographic resolution, speed, and sensitivity over conventional HPLC systems, has been increasing its presence substantially. This particular sub segment is said to gain another 5%-10% of the market in the next 2-

3 years. The Indian Ion Chromatography (IC) market is quite small as compared to but is rapidly increasing at an estimated rate of 20 %. The same is attributed to its usage in environmental monitoring. Dionex Corporation holds the major low end market is shared between Dionex and Metrohm. The Gas chromatography is said have grown at the rate of 6% in 2011. The dominant player includes Chemito followed by Agilent, Perkin Elmer, Shimadzu. Thermo The visible trend in this segment is the gradual shift towards GC-MS.

The technological advancements with advent of systems for faster analysis have also opened up newer opportunities of growth notably ultra-high performance liquid chromatography (UPLC), monolithic columns and hydrophilic interaction chromatography (HILIC). UPLC has rapidly grown out of its infancy and moved into the analytical labs. Monolithic columns also hold great potential for very fast separations. Waters introduced Acquity UPLC in 2004, using columns packed with particle sizes of 1.7 micron and advances in instrumentation designed to deliver 15000 psi. Agilent offers RRLC - Rapid Resolution Liquid Chromatograph mentioning that the method developed on a conventional HPLC can be transferred seamlessly to a RRLC. Shimadzu has launched UFLC - Ultra Fast Liquid Chromatograph offering high throughput but without high pressure. Dionex achieves Fast LC with Acclaim Fast column with UltiMate 3000 Intelligent LC. Thermo has launched Accela High Speed LC that has been designed to optimize performance of sub-two micron particle columns.

Despite the possible adverse economic conditions, the government funding towards R&D is still expected to increase. Therefore the chromatography segment is expected to maintain at least the minimum of 15% growth rate in the current financial year as well.

### **Highlights:**

- â– Growing at an average 20% rate, HPLC constitutes major chunk of chromatography market.
- â– Indian pharmaceutical industry contributes more than 65 percent for the HPLC market.
- â– Waters & Agilent continue to dominate the segment.
- â– UPLC is the fastest growing LC market segment.dominated by Waters (60 percent) followed by Agilent (17 percent) and Shimadzu (8 percent).