

# ガスクロマトグラフ GC-1A

## Gas Chromatograph GC-1A

株式会社島津製作所／Shimadzu Corporation

ガスクロマトグラフは、常温で気体および液体の測定対象に含まれる比較的沸点の低い成分を分離し、含まれる量を測定する装置である。溶解、吸収する材料を塗布または充填した管(カラム)に、試料を投入して移動相(キャリアガス)を流すことで、試料中の成分ごとの溶解、吸着性の違いにより、各成分ピークがクロマトグラムとして記録される。

GC-1Aは、国産初のガスクロマトグラフであるだけでなく、ガスクロマトグラフィーの原理が発表されて間がなく、世界でも製造販売しているメーカーがほとんどない1956年に、先進的な製品として国内の石油会社に納入された。装置には、気体試料および液体試料の導入部を備えるなど、広範囲な応用も念頭に置いており、それがその後の迅速な普及につながった。

同装置は、1957年の日本化学会にも出品されて、多くの人たちの注目を集め、勃興期にあった日本の石油化学産業の発展に貢献した。

Gas chromatograph is used for separating constituents, included in gas and liquids as measuring objects at ambient temperatures, which boiling point is relatively low, and is used for measuring contained amounts. The peak values of each ingredient are recorded as chromatograms by the differences on dissolutions and adsorptive properties per ingredient in samples by putting samples and flowing mobile phases (carrier gas) into tubes (columns) to which dissolved and absorbed materials are applied or filled.

GC-1A was not only the first domestic gas chromatograph but also was delivered to the domestic oil companies as the leading-edge product in 1956, when there were very few manufacturers offering such products in the world because it was early after the principle on gas chromatographs were introduced. The device was equipped with openings to put gaseous and liquid samples to consider various applications, which caused that it was quickly spread afterwards.

This device was introduced in Chemical Society of Japan in 1957 and it was gathered attentions from many people, contributing to expand the petrochemical industry on the rise at that time.

