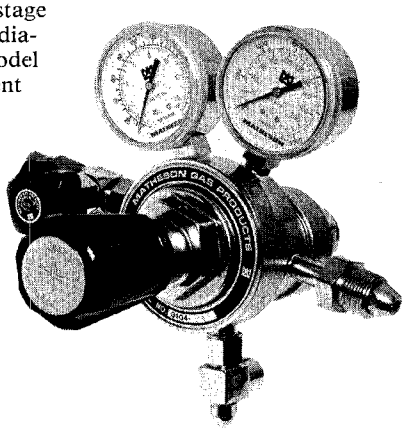
Special Matheson Products

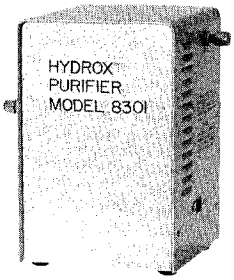
Improve GC Techniques

Pure Gases. Use the right gas! Don't use a welding grade of gas for a gas chromatograph. It can contain substantial amounts of water and oxygen. Matheson recommends UHP Helium or HP Helium for thermal conductivity detectors, a "zero gas" for FID and a special higher purity Ultra P-5 and Ultra P-10 for electron capture detectors. These are available from all Matheson plants. Circle No. 40

Use a Regulator Which Minimizes Diffusion. We recommend a two stage regulator with a metal diaphragm such as our Model 3104, which has excellent outlet pressure control. It minimizes inboard leakage of air or water from the atmosphere and does not outgas impurities into the carrier or fuel gas system as rubber diaphragm regulators can. Circle No. 41



Purifiers and Filters. Matheson supplies specially purified gases for GC, but we also recommend the addition of a filter or purifier to the system. Purifiers and filters remove trace water, oil, oxygen and



particulates. In using such devices in our own laboratories, we find we can enhance the performance of our GC's. Circle No. 42

Calibration Standards. Sometimes called reference standards and span gases, these are gas mixtures and are the best means of calibrating a GC.

Matheson has prepared valuable tables and related information on Calibration Standards: "Gas Mixtures; Facts and Fables", and a wall chart entitled "How To Succeed At Gas Chromatography". These are available for the asking. Circle No. 43

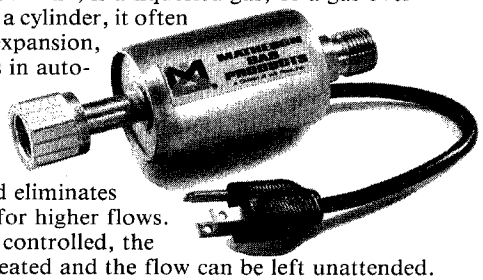
Improve AA Techniques

Acetylene, 99.6% and Nitrous Oxide, 99.0%. Gases containing minimum impurities give less interference with final results. Matheson gases are specially purified for AA instrument use. Circle No. 44

Series 6103 Flash Arrestor. A flash arrestor is installed downstream after the regulator and cylinder. Should flashback occur, with the accompanying shock wave, the Matheson Flash Arrestor will seal off the path to both regulator and cylinder. This will prevent an explosion of greater magnitude in the regulator or cylinder. For more information, Circle No. 45

450 Purifier. The model 450 is a purifier with 454 activated charcoal filled replaceable cartridges. It is specially designed for controlling the acetone vapor from acetylene. It belongs in an AA system. Circle No. 46

Nitrous Oxide Heater. Because nitrous oxide, frequently used as an oxidizer gas in AA, is a liquefied gas, or a gas over liquid contents in a cylinder, it often cools or ices on expansion, causing problems in automatic control. The heater we offer is installed between cylinder and regulator and eliminates icing and allows for higher flows. Thermostatically controlled, the N_2O is not overheated and the flow can be left unattended. Works simply with 115 Vac. Circle No. 47



Automatic Regulators 1PA-150 and 1L-326. If you are using AA, choose the correct regulators. In the laboratory, use regulators designed for the specific gas. Information on these regulators can be obtained, Circle No. 48

Cylinder Scale, Model 8510. To judge accurately when a liquefied gas is nearing empty, Matheson has designed and sells a cylinder scale. We recommend this for nitrous oxide because it will let you know...and it's the only way...when the cylinder is empty. Invaluable! Circle No. 49

For further information, contact Matheson, 30 Seaview Drive, Secaucus, N.J. 07094.

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