MAKING THE IMPOSSIBLE DREAM INTO A REALITY

"BECKMAN INSTRUMENTS, INC. IS PROUD OF ITS ACTIVE ROLE... PAVING THE WAY TO MANNED EXPLORATION OF THE LUNAR SURFACE."

BECKMAN BITS, 1964
SPACE CHROMATOGRAPH
MOON ANALYZER
PHOTOS

WHAT IS CHROMATOGRAPHY? IT'S A TECHNIQUE FOR SEPARATING AND ANALYZING A COMPOUND. IT'S USEFUL FOR SPLITTING AN UNKNOWN COMPOUND INTO ITS COMPONENT PARTS. THE SAMPLE GETS VAPORIZED BUT IT DOESN'T DECOMPOSE.

THESE COMMERCIAL PHOTOS TAKEN IN LONG BEACH, CALIFORNIA, SHOW THE BECKMAN-ENGINEERED SPACE (GAS) CHROMATOGRAPH THAT WAS COUPLED WITH A MASS SPECTROMETER TO ANALYZE MOON SAMPLES - THE SAME METHOD USED LATER TO ANALYZE SAMPLES RETRIEVED BY MARS PROBES IN THE 1970S.
LIFE SUPPORT PRODUCTS AND PHOTOS

Just one of the essential items an astronaut would put on, the physiological environmental system (upper left) was a vest with instrumentation that performed life support monitoring functions like EEG, ECG, and respiration. It was used by crew aboard the Gemini space capsules in 1965-1966.

Photographed in Anaheim, California, the small, lightweight Beckman polarographic oxygen sensor (right) was used in the first space suit prototype in 1960 as a means for monitoring oxygen pressure in artificial atmospheres.

The Beckman physiological and cardiovascular monitoring system aka cardiovascular reflex conditioner (lower left) was developed in 1964 and used in space suits during the Apollo space program as a way to counteract the negative effects of weightlessness. It worked by alternately inflating and deflating the cuffs of the suit in order to stimulate blood flow throughout the body.
This 1962 brochure was created as an overview of the company’s capabilities related to data acquisition and processing systems. It was also intended as a guide for exploring the 50-plus applications of those systems in categories that included command and control, test and evaluation, automatic checkout, and special-purpose data.

At the time of its printing, the company had recently reported record sales of $88M, which represented a 20% increase over the previous year. Around the world, there were 4,500 Beckman employees and the company was bringing in more engineers and scientists for research and development of new products that would have meaningful impact on space exploration.
In 1964, the Ranger VII spacecraft was fitted with a camera and used to photograph the surface of the Moon all the way up to impact. This image was the last one taken before the spacecraft's collision just 2.5 seconds later.

From less than 4 miles away, the camera captured one large crater about 300 feet in diameter and many smaller craters that measured approximately 30 feet across by 10 feet deep.

The inscription on the image, “To Arnold Beckman in appreciation for your help and support,” was signed by M.H. Pickering, then-director of NASA’s Jet Propulsion Laboratory (JPL).

Pickering photo sourced online. Rights free for edit, use, and share.
WATER PURITY SENSOR AND SIGNAL CONDITIONER

PRODUCT AND PHOTO

This image accompanied a 1981 press release about Beckman-developed instruments for life support and electrical systems aboard the NASA Space Shuttle Columbia's maiden flight.

It showed the Beckman water purity sensor and signal conditioner, which was used to monitor the astronauts' water supply so that it would be safe to drink. The sensor was designed to set off an event light on an alarm panel if it detected contamination.
BECKMAN APPLIES LIFE SCIENCE AND CHEMISTRY INSTRUMENT EXPERIENCE TO SPACE SHUTTLE

Two instruments designed to monitor life-support and escape systems aboard the National Aeronautics and Space Administration (NASA’s) space shuttle utilize basic technology, refined for a unique purpose.

Developed by Beckman Instruments, Inc., a leading manufacturer of scientific, medical and industrial instruments and systems, the system continuously monitors the space shuttle’s pressurized area for potentially lethal increases of carbon dioxide (CO₂), and the system continuously measures the electrolytic conductivity of the shuttle fuel cell’s product water. This conductivity system is supplied through Power Systems Division of United Technologies by Beckman’s Cedar Grove Operations in New Jersey. The carbon dioxide sensor, produced by Beckman’s Cardiopulmonary Instruments Department in Anaheim, Calif., is subcontracted through Hamilton-Standard Division of United Technologies.

"more"

IN 1981 THE SPACE SHUTTLE COLUMBIA COMPLETED A 54 1/2 HOUR FLIGHT WITH SOME INNOVATIVE TECHNOLOGY ABOARD: THE BECKMAN CARBON DIOXIDE SENSOR. THE NEWLY DEVELOPED PRODUCT WAS DESIGNED TO MONITOR THE AIR INSIDE THE SHUTTLE, TESTING SAMPLES TO ASSESS THEIR LEVELS OF CARBON DIOXIDE.

WHY WORRY ABOUT THIS NATURAL BYPRODUCT OF THE RESPIRATION PROCESS? EXCESS AMOUNTS OF CARBON DIOXIDE COULD INDICATE AN OXYGEN POOR (AND POTENTIALLY LETHAL) ENVIRONMENT FOR ASTRONAUTS, NEGATIVELY IMPACTING THE CREW'S ABILITY TO FUNCTION.

BECKMAN INSTRUMENTS ISSUED A PRESS RELEASE (LEFT) TO INTRODUCE AND EXPLAIN THE NEW TECHNOLOGY, WHICH WAS PART OF A SUCCESSFUL MAIDEN FLIGHT AND SUBSEQUENTLY INSTALLED FOR FUTURE SPACE SHUTTLE FLIGHTS.