

PEOPLE: CARY

Howard Cary passed away just 10 years ago (Dec 19, 1991).

In 1946, after leaving Beckman Instruments where he played a relevant role in the development of the DU, the first *modern* spectrophotometer, he founded Applied Physics Corporation.

This company had a relevant role in advancing UV-VIS spectroscopy....., the first scanning/recording double beam spectrophotometer (Cary 11) was delivered in May 1947 to Mellon Institute, Pittsburg, Pennsylvania (US).

Cary 11 was followed by models 14, 15 which were milestones in this field and quite a few are still in use.

Prices were very high compared to any competitors: to give you an idea the Nov 30, 1964 export price list indicates the Cary 14 (UV-VIS-NIR recording spectrophotometer) at US\$ 18,400 + US\$ 250 for 50 Hz conversion and + US\$ 75 for 220V transformer, you may easily calculate an equivalent today cost.

Early in the sixties the Cary 60 was introduced¹, this was an ORD spectropolarimeter, but soon later on a CD attachment was developed under the Roussel-Uclaf patent. The Cary 60 was running only with 60Hz mains voltage, so in Europe a very expensive (and noisy) frequency converter was also necessary.

In 1970 the Cary 61 was introduced for CD only with fully solid state electronics and able to run also at 50Hz.

Well both Cary 60 and 61 have been the instruments used by most early CD laboratories in US and Europe, so many leading CD spectroscopists built up their experience on these models.

CD spectra of Bovine Serum Albumin

run in 1968 on a Cary 60

-concentration: 18 mg/ml

-solvent: water

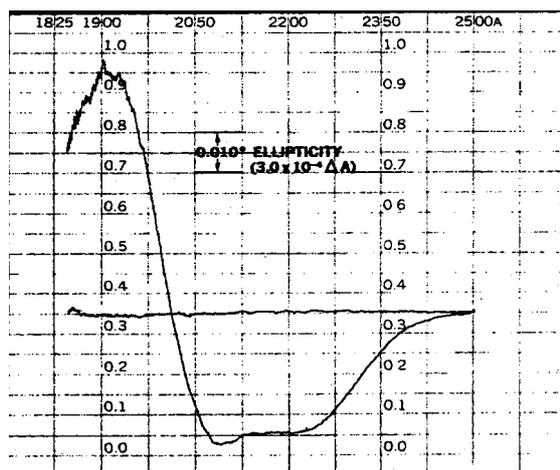
-cell path: 1mm

-SBW: 1.5nm

-scanning speed: 6nm/min

-time constant: 10 sec

Not so bad even for today standards!



During the seventies Varian, which purchased Applied Physics Corporation in 1966 and slowly integrated it into its own facilities, dropped the CD/ORD line since manufacturing quantities per year were not high enough for their standards.

The introduction of piezoelectric modulators made a substantial improvement in the reliability of CD instruments, so many Cary units have been modified/updated by users and lately Aviv Instruments had been rebuilding *new* CD apparatus refurbishing old Cary optics.

Today Cary labeled spectrophotometers are still manufactured by Varian in Australia, while these are actually *modern-plastic* units, sharing little with their forerunners, it's highly significative that the Cary name is still profitably used today, since still synonymous of high quality.

1 Cary H., Hawes R.C., Hooper P.B., Duffield J.J., George K.P., *Appl. Opt.*, 3, 329 (1964)