Le Laboratoire General des Corps Gras du C.N.R.S. (Paris)

Le Laboratoire General des Corps Gras (C.N.R.S.) is a public service institution for scientific research under the National Ministry for Education in France. Among the numerous departments is an important group of laboratories in Bellevue, near Paris. The laboratory for fats is one of these, having been established in 1942. It is engaged in scientific research in vegetable and animal oils and fats, choosing basic and practical projects useful to laboratories and industry. All works are published, as a public service, in French scientific publications such as Journal des Recherches du C.N.R.S., Revue Française des Corps Gras, Oléagineux, and Bulletin de la Société Chimique de France, or in foreign journals or as patents. Many are abstracted by the Journal of the American Oil Chemists' Society and by Chemical Abstracts.

Another purpose of the laboratory is to prepare students, as licenciés or engineers, for the doctorate thesis in fats at the University of Paris. Some of these come from foreign countries, particularly Belgium. Eleven have earned the doctorate degree since 1945.

In the past 10 years the activity of the laboratory has included theoretical, practical, and analytical studies leading to publication of 150 papers.

One of the chief theoretical projects has been a study of autoxidation, especially the polarographic behavior of peroxides. The mechanism of the autoxidation of saturated fatty acids has been described as β-oxidation with formation of oxalic acid and even fatty acids of low molecular weight.

Some years ago R. Perron made a study of the synthesis of ethers and esters derived from fatty alcohols, with para toluene sulfonic acid as the catalyst. Also a group of chemists has measured with precision the solidification points of the ternary mixtures of fatty acids (saturated fatty acids from C_{10} to C_{18}, oleic and linoleic acids) and has developed a useful group of triangular graphs. This work led to the construction of a new apparatus for determination of melting and solidifying points, the Paquot-Perron Thermoscope, which gives points between $-100°$ C. and $+120°$ C. with a precision of $0.1°$ C.

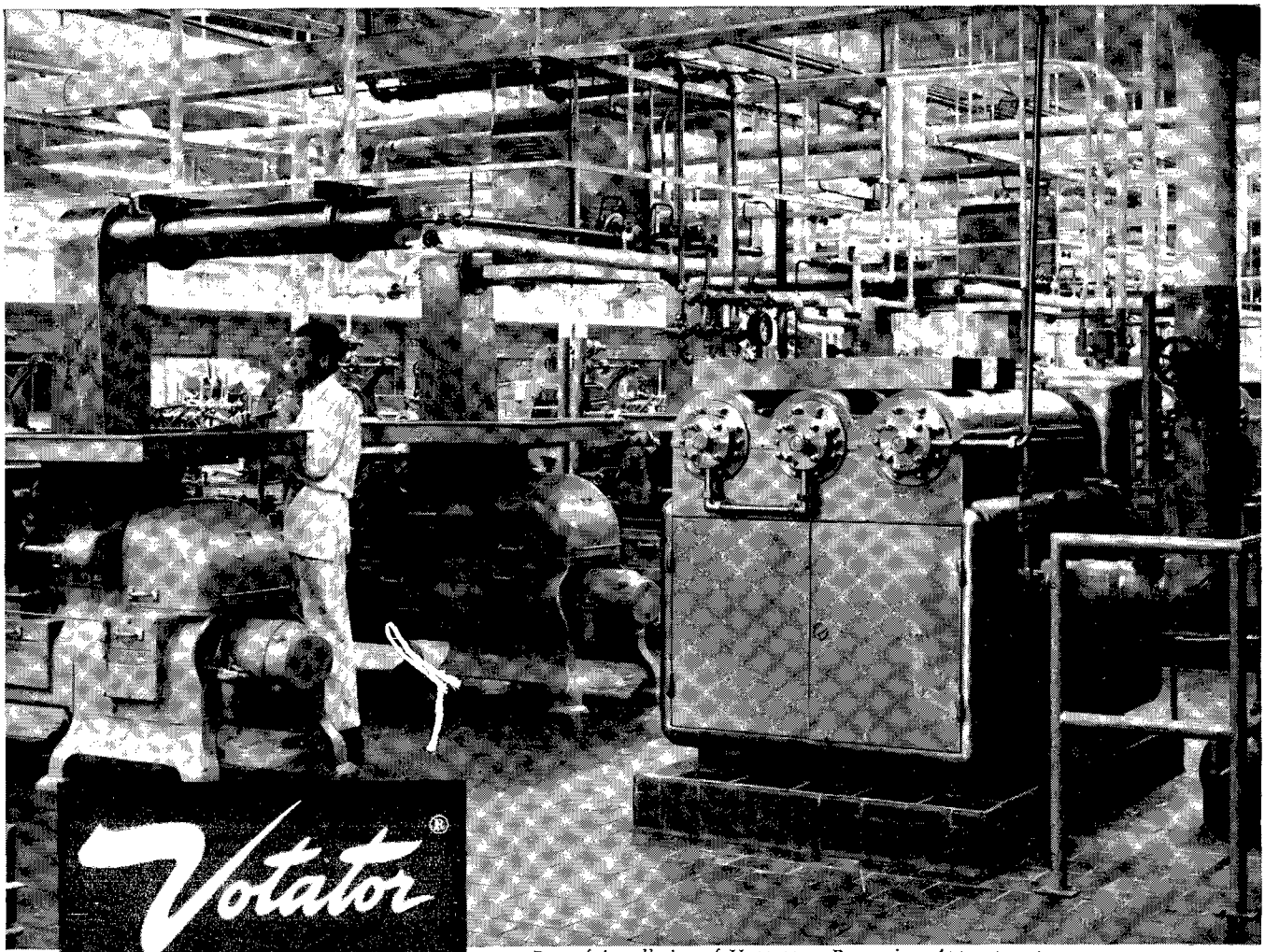
Industrial applications at Bellevue have included the use of dichlorethane as an extraction solvent for oils, the use of the same compound as a winterizing solvent for peanut oil. The bleaching of oils, also of soaps, has been carried out successfully by sodium chlorite with stannous chloride as the activator. This chloride is thought to have some important advantages.

In lipochemistry the aliphatic long-chain dicarboxylic acids are being studied. Patents assigned to the laboratory claim the preparation of dicarboxylic acids by nitric acid oxidation from saturated fatty acids or esters, also the synthesis of numerous derivatives, some of them new and interesting.

In the field of analytical studies papers have been published about the reactions occurring in the determination of the saponification value, also about a β-method for determining the molecular weight for fat derivatives by spectroscopy. Studies have been made of the composition of minor constituents of several fats, *i. e.*, the unsaponifiables of sulfur-olive oil of Tunisia.

This comparatively young laboratory is taking its place among the important laboratories for fat research in France and in Europe. It will be host this fall to the International Society for Fats (I.S.F.) in Paris, October 21-23, 1957, and members are looking forward with pleasure to participation by American chemists as well as European. Everyone who has an interest in this conference is invited to attend. Information may be obtained by writing to this laboratory.

Charles Paquot
Director, Le Laboratoire General des Corps Gras
Chairman, I.S.F. meeting



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