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# Chemistry at Jeffersonville Quartermaster Depot

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GLOBAL war-fare has imposed tremendous burdens on the Quartermaster Corps in the procurement, storage, and distribution of supplies to the Armed Forces. In the first World War the battle zone extended over an area in which the climate was similar to that of the United States. Equipment could be procured and produced with a certainty of knowledge as to where it would be used.

But in the present conflict, waged as it is on scores of fronts, scattered over the length and breadth of the globe, the conditions under which our armies are called upon to fight vary from the Arctic to the tropic jungle.

The historic Jeffersonville Quartermaster Depot, charged with the responsibility for the procurement of over 20,000 articles of supply and the preparation of specifications of the majority of them, faced early in the war the need for an efficiently organized unit to conduct work in research, development, testing, and the preparation of specifications to be used under the vitally varying conditions of the present war.

Accordingly, the present Engineer-

ing Division was established at the Jeffersonville Quartermaster Depot early in 1941. This unit has given to the Depot the unique distinction of being the only Quartermaster installation in the country, and probably in the world, charged with the four-fold mission of procurement, manufacturing, scientific research, and development, and the general storage and issue of supplies to America's Armed Forces.

Housed in a modern, well-designed permanent building containing testing laboratories, offices, drafting rooms and equipment for blue printing, photostating, and multilithing, the Division is called upon for a variety of vital functions, including the physical and chemical testing of many types of material, research and development work, and the preparation of specifications, drawings and bills of materials.

Creation, adaption, substitution and research, are the media through which new materials and designs are given the breath of life at Jeffersonville. To nurture this progressive development by constant advancement over its problems is the function of the laboratory

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and its staff, to whom a thousand problems come for solution: What's it made of? How does it work? Will it stand up? Why did it fail? Will it fill the bill? What can be substituted?

In this extensive and ambitious program, chemistry plays an important role at Jeffersonville. One large section is concerned with chemical analysis; another, with research and development studies in the prosecution of which many branches of chemical, physical and engineering science are invoked.

Within these laboratories the war has brought together a professional group exhibiting a discipline of thought and versatility in experimentation concomitant with its collective years of study and experience. These men and women today are dedicating their energies and abilities to the solution of many of the technical problems arising out of the determination of the Quartermaster Corps to supply our troops with the finest equipment in the world.

The great variety of equipment items and materials handled by the Depot demands a corresponding diversity of technical skill and knowledge. Textiles must be analyzed for dye type, pigments, resins, water repellents and mildewcides; plastics and synthetic rubbers are identified, and their resistance to a multitude of chemical and physical conditions studied;

paints, lacquers and wood sealers are tested for composition, and their protective functions evaluated in the light of the extremes of climate imposed upon equipment by world-wide war; metal utensils and mess gear receive constant attention for composition, durability of plating, and functional quality; leather used in saddles, dispatch cases, map cases, straps, and harness must be properly tanned, cured and finished. Insect repellents, field bake ovens, cork products, mobile laundries, marking inks, intrenching shovels, goggles, pack-boards and can openers are but a few of the many other articles and materials tested and studied.

The conduct of these activities is implemented by one of the best equipped laboratories in this part of the country. Apparatus available permits the application of advanced chemical and physical methods including spectrography, spectrophotometry, polarography, electrometric analysis, metallography and microchemistry.

The War Department has assigned an important task to the chemists at Jeffersonville. Answers to the many questions and problems to which they address themselves today are helping to maintain the superiority of equipment used by our troops wherever they engage the enemy, to the end that the day of victory for the Allies may be quickened.