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# NEWS from

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MURRAY HILL 9-5000

*for Release* Immediately

## WAR-BORN FILTER USED TO REMOVE TARS AND NICOTINE IN CIGARETTE

Lorillard Introduces Kent Cigarettes With Built-In Filter Using Similar Ingredient To Atomic Plants -- Eliminates 7 Times More Tars and Nicotine Than Heretofore --

New York, March 19: A new cigarette with a built-in filter which removes seven times more tars and nicotine than any cigarette filter heretofore developed was introduced here today by P. Lorillard Company under the brand name Kent.

The ingredient which accomplishes this unprecedented degree of filtration is currently used to remove radio-active materials from the air at plants of the Atomic Energy Commission and is said to be the most effective filter material yet commercially available. Its adaptation to a cigarette is the culmination of months of intensive research and development work in Lorillard's Research Laboratories under the direction of Dr. Harris B. Parmele, research director of the company. Research consultants from abroad and from American colleges assisted in this work.

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The reduction in the sum of tars and nicotine has resulted in unprecedented physiological results in clinical tests carried on by an independent research laboratory with a group of so-called sensitive persons who suffer abnormal drops in skin temperature while smoking.

In these tests the new Kent cigarettes caused no change in the average skin temperature of these sensitive groups. A leading conventional type filter cigarette used by the same group caused an average drop of 7.3 degrees Fahrenheit, with a maximum of 15 degrees and a minimum of .7 degrees. For another leading filter cigarette the average drop was 8.1 degrees Fahrenheit, with a maximum of 10.3 degrees and a minimum of 4 degrees Fahrenheit. The new Kent cigarettes on this same group caused no drop in average skin temperatures.

In all the tests over a period of six months about one third of the people were found to be sensitive smokers and two thirds non-sensitive. This compares favorably with the findings of medical literature. Included in the subjects tested were persons who had been ordered either not to smoke or to restrict their smoking. The skin temperature, medical authorities state, is a measurement of the function of the peripheral vascular system and is an indication of the blood flow through the small arteries and their capillaries to the tissues.

The new Kent cigarettes will be marketed immediately in New York, Los Angeles, and Chicago. Additional distribution will be effected as rapidly as production can be increased. It is expected that Kent cigarettes will be available nationally within six months. Patents on the new filter material and its application are pending.

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Back of the development of the new filter is a dramatic story of war-time research, the fruits of which were to play a significant role in adding superior protection to our armed forces' gas masks and in the rapidly developing requirements of Atomic Energy plants.

The search for a new and more efficient filter had its start when our government recognized in the early days of World War II the need to provide additional protection for our then existing gas masks. They were unable to remove the extremely small particles of toxic dispersions which we knew were available for use against our troops, with potentially disastrous results.

Research scientists of the Army and Navy joined forces with scientists working under grants from the National Defense Research Committee to develop a truly efficient filter for both gas masks and respirators. The work culminated in the development of a revolutionary new filter material, which was subsequently adopted by the Metallurgical Laboratory of the University of Chicago, then working on the nation's first atomic pile.

Today this new filter material removes radio-active contaminants from the effluent gases discharged into the air at Atomic Energy Commission plants in various parts of the country. It is also used in both gas masks and respirators. Its adaptation for use as a cigarette filter gives it a utility in a product which is probably more widely consumed than any other product in the country.

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In introducing the new Kent cigarettes at a press luncheon and pre-view at the Waldorf-Astoria Hotel, Robert Ganger, executive vice president of Lorillard, said that this marks a new era in cigarette smoking in this country, particularly for the millions of people who are sensitive smokers. Previous filters, he pointed out, have been only relatively efficient. The new Kent filter, which is known as Micronite because it removes nicotine and tar particles as small as two tenths of a micron (which is two ten thousandths of a millimeter) reaches a peak of efficiency heretofore unattainable in a cigarette filter.

In the development of the new filter, Dr. Parmele worked closely with Dr. Harold W. Knudsen, technical director of Hollingsworth and Vose, East Walpole, Mass., who was associated with the Naval Research Laboratory's work on the new filter material during the early days of World War II.

An affiliate of Hollingsworth and Vose Company, which did a great deal of war-time pioneer work and post-war development on filtering materials, is supplying the filter material for Kent cigarettes.

Months of intensive research and development work were carried out in Lorillard's research laboratory following the removal of this material from governmental security classification about two years ago.

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At first the new filter material was so effective it removed all the smoke. The smoker puffed in only warm air. Various carrying agents for the filter were tried in an effort to reduce the maximum efficiency of the filter. Hundreds of experimental cigarettes were made and tested under controlled laboratory conditions. The ultimate goal of this research and development work was to provide a filter which would remove maximum quantities of tobacco tars, which are irritants in cigarettes, and of nicotine, which is highly toxic. At the same time the smoke had to retain the fine flavor and aroma of the cigarette's tobaccos to fully satisfy the smoker's desire for smoking pleasure.

The desired results were achieved by combining the new filter material with a carrier fiber in scientifically determined proportions. In addition, however, the cigarettes had to be easy drawing to meet the demands of smokers.

Ultimately an ingenious method of interleaving the filter material product with a cellulose substance was developed. This provided filter channels through which the smoke traveled. The filter action takes place as smoke moves through these channels.

In explaining how the new filter works. Dr. Parmele pointed out that its action is dependent upon the phenomena related to physical_chemistry.

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"Basically, it is quite simple", he said. "The filter material, which is a secret mineral ingredient, has certain peculiar physical properties when seen under the microscope. As the smoke is drawn through the cigarette to the filter tip it travels through the channels provided by the interleaving of the cellulose material. Here it must pass through the filter material. As it does so, both tobacco tars and nicotine become affixed to the filter material due to its unique surface activity, just as in the atomic plants this same filter material removes radio-active contaminants or in the gas masks and respirators it removes small particle dispersions of toxic smokes.

"Until now filter cigarettes were either of cotton or paper or of combinations of cotton and paper. Because these materials do only a partial job of removing tobacco tars and nicotines they are relatively inefficient. Now, however, we have a cigarette filter which is so efficient that in tests it has even filtered out air-borne bacteria and other microorganisms. It thus permits smokers to inhale air which contains fewer bacteria and dust particles than the air they normally breathe. Actually, we are doing on a small scale with tobacco smoke what the atomic energy plants are doing on a much larger scale with radio-active contaminants. In both instances harmful materials are removed by filtration. The basic scientific principles of this filtration are the same in both instances and the differences are really those of degree."

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These new cigarettes are a blend of the best grades of imported and domestic tobaccos, Mr. Ganger said, pointing out that thousands of tobacco tests were tried out before the proper blend was determined to permit the filter to remove harmful ingredients and yet at the same time to leave untouched those effects of tobacco combustion which provide taste, flavor and aroma.

"We knew from virtually the very inception of our research that we could filter out everything, including the smoke," Mr. Ganger said. "But we realized that the smoker must get full flavor, taste and aroma if he is also to get smoking satisfaction, which is one of the basic reasons for his smoking in the first place. To get this balanced combination required hundreds of hours of research and experimental work."

P. Lorillard Company is the oldest tobacco company in the United States, dating back to 1760 when Pierre Lorillard, a young French immigrant, opened a New York tobacco factory and store. For almost two centuries Lorillard has been a pioneer in its industry. In 1789 it published the earliest known American tobacco advertisement. It originated the idea of putting up snuff in animal bladders which were dried and tanned like parchment and were the forerunner of cellophane, which this same firm years later was the first to use on packages of cigarettes to preserve freshness. It was also the first to use aluminum foil and to use tear tape on cellophane wrappers. The company's products have served our armed forces in every war the nation has fought.

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