

The result showed equally that the presence of carbollic acid exerted no retarding influence on the oxydation.

5. Iron filings were shaken up with the water with the same result.

6. A "philosophical lamp" was made by arranging a platinum spiral over the wick of a lamp containing alcohol mixed with a little ether; on lighting, and then blowing it out, the platinum continued to glow brightly. Pieces of solid carbollic acid were then carefully placed in the cup of the brass wick-holder, surrounding, but not in contact with, the wick. The heat soon melted the acid and raised its vapor round the platinum spiral, but without occasioning any alteration in the brightness of its glow.

7. Lead pyrophorus was poured into two long and narrow jars of air, one of which had its interior moistened with liquid carbollic acid. Not the slightest appreciable difference could be detected between the rapidity of oxydation in the two jars.

8. Paper moistened with sulphate of manganese solution, and dried, was dipped into caustic ammonia, both with and without carbollic acid. No difference whatever could be detected in the rate of its darkening.

These experiments prove conclusively that the tar acids have no special power of retarding oxydation.

Other experiments were then instituted in the endeavor to understand more clearly the mode of action of carbollic acid.

9. Some meat was hung up in the air till the odor of putrefaction was strong. It was then divided into two pieces; one was soaked for half an hour in chloride of lime solution, and was then washed and hung up again; the offensive smell had entirely gone. The other piece of meat was soaked in a solution of carbollic acid containing 1 per cent. of the acid; it was then dried and hung up again. The surface of the meat was whitened, its offensive odor was not removed, though it was masked by the carbollic acid. In two days' time the bad odor had quite gone, and was replaced by a pure but faint smell of carbollic acid. In a few weeks' time the pieces of meat were examined again. The one which had been deodorized with chloride of lime now smelt as offensively as it did at first, whilst the piece treated with carbollic acid had simply dried up, and had no offensive odor whatever. It was then hung up for another month and examined; no change had taken place.

10. A piece of fresh meat was soaked in a 1 per cent. aqueous solution of carbollic acid for one hour; it was then wrapped in paper and hung up in a sitting room in which there was a fire almost daily; at the end of ten weeks it was examined. It had dried up to about one-fourth its original size, but looked and smelt perfectly good and fresh, a very faint odor of carbollic acid being all that was perceptible. It was soaked for twenty-four hours in water, and then stewed with appropriate condiments and eaten. It was perfectly sweet, and scarcely distinguishable from fresh meat, except by possessing a very faint flavor of carbollic acid, not strong enough to be unpleasant.

11. Animal membranes in the forms of gut, skin and bladder, were perfectly preserved if immersed direct in aqueous solution containing 1

per cent. of carbollic acid; but if previously moistened with water, and then immersed in dilute carbollic acid, the preservation of the skins was not so complete.

12. Animal size and glue mixed in the form of solution, with small quantities of carbollic acid, were perfectly preserved from change even in hot weather.

These are important experiments. They point out in a striking manner the difference between mere deodorizers and antiseptics. Hitherto attention has been almost entirely confined to the deodorization of gases arising from putrescence. The effect has been combated, whilst the removal of the cause has received scarcely any attention. Chloride of lime, one of the strongest of the class of deodorizers, acts, as has been shown, only on the gases of existing putrefaction, but it has no influence over the future. Carbollic acid, on the other hand, has scarcely any action on fetid gases, but it attacks the cause which produces them, and at the same time puts the organic matter in such a state that it never re-acquires its tendency to putrefy.

CHOLERA A POISON.

Two months have elapsed since cholera first made its appearance in New York, and yet up to Saturday last only 34 deaths had occurred in that city. It is now believed to be a poison, and is treated as such. Dr. Harris in his report to the Sanitary Committee of the Board of Health, New York, says:

We must speak of and treat cholera as a poison. It attacks the vital functions as a poison. It arrests the circulation, interrupts the respiratory processes, dams up all excretions by the great emunctories of the liver and kidneys, decomposes the blood, and kills as virulent poison kills.

That cholera is an infectious poison every one of your medical officers ought to believe. That this infection may be controlled and destroyed by our agency, if means are well chosen and promptly applied, I believe so fully that I would as soon see the torch applied to a thousand mansions in our city as to hesitate to assume what we know. The rice water of albuminous fluids of cholera patients have the property of creating very soon after being voided and exposed to the atmosphere. In every instance, I rejoice to say, you, the Superintendent and the President of the Board have promptly indorsed this view of the danger and the duty, and in every instance I believe, every precaution has been used that science, experience, and exact knowledge could suggest. That there are other and widely different diffused factors of an epidemic of cholera to be feared, we very well know, but with profound reverence we can fearlessly assert that all such factors will be harmless if the few factors of cholera which human agency can control are actually controlled by the Board of Health and the inhabitants of the city. In dealing with these uncontrollable poisons that make up the epidemic causes of cholera there is greater demand for vigilance than in the management and control of nitro-glycerine or the most subtle chemicals. Instant cleansing and absolute disinfection must be conferred wherever the germs of cholera