

ated, and much of it escapes. In the process by fermentation, the conversion of the starch goes on successively. Baking powder is made of cream tartar, bicarb. of soda and rice flour. If the ingredients are all strictly pure, the following formula will be correct: Thirty-one parts of soda, 69 parts cream tartar, 10 parts rice flour. But these articles as sold at drug stores are not always pure. An analysis is generally necessary to determine how much weaker they are than the pure article. Buy baking powder of responsible dealers and of a well-known brand. Never take chances in teaset; if you want a good article.

Too much soda is generally used. One small teaspoonful of it to the quart of flour, if it is skillfully neutralized with cream tartar or sour milk, will be enough. Plunging the soda into sour milk and then stirring in the cup for five minutes before putting it in the flour, as is often done, causes about half of the carbonic acid gas to escape, thus losing the very thing that the soda is used to produce.

The only thing to do to preserve fruits or other foods is to keep them away from those little atoms called *bacteria*. They are little, but mighty in numbers and influence. Anything that will destroy *bacteria* will preserve food. A piece of beef treated to the fumes of burning sulphur will keep two weeks longer than one not so treated.

The lumps in jelly are glucose. This is made when acid fruit is boiled with sugar. The lumps when washed are found to be like the sugar found on the exterior of good raisins, and hence called "grape sugar" or "glucose." It is only two-fifths as sweet as the original sugar. The waste caused by its manufacture may be avoided by adding the sugar to the juice when the cooking process is about completed, and the juice ready to remove from the fire.

The piece of paper put on top of the jelly cup does not prevent mould, but a lump of paraffine dropped in the tumbler while it is still hot enough to melt the paraffine and form a film over the top will prevent it. This is a very useful and cleanly article.

Fruit that will not jelly is too ripe. Just ripening it contains a substance called *pectose*, which, when heated, will solidify on cooling. If the fruit goes on ripening the *pectose* is changed to *pectin*, which will not make jelly. Fruit for jelly must not, then, be "dead ripe," but just approaching ripeness.

The chemical process by which grease and lye are converted into soap was explained, and also the tests for detecting glucose in sugar were given.

Butter gets "strong" when *bacteria* gets to work at it, and protection from them keeps it sweet. This may be done by excluding it from the air in which the *bacteria* float. Sealing the butter in tight jars or immersing it in strong brine will do it. Salt on the top of butter will not protect it; brine around it will.

Butyric acid, which means strong butter, is never found, except where the butter is exposed to some ferment, and this ferment is caused by *bacteria* germs, coming always from the atmosphere.

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A VACATION FROM TOBACCO.—The Pittsburgh *Dispatch* speaks of a distinguished physician who abstains from smoking every October, in order to give his system thirty days' recuperation every year from the effects of tobacco in accelerating the movement of the heart. He finds this acceleration very marked by the end of September. His October abstinence causes the heart to return to normal action; and on the first of November he commences another year's course of smoking.