

STARCH.

The mealy substance known by the name of starch forms the basis of some very simple and easily performed chemical experiments. Rasp some potatoes on a grater, knead the pulp thus obtained with water, and squeeze it in a linen cloth; the fibrous particles of the cells remain behind, but the juice, together with a large proportion of the starch, runs through. Let the liquid remain quiet for some hours; it becomes clear because the heavier starch settles at the bottom. Pour off the liquid, wash the starch several times with fresh water, allowing it to settle each time, and then dry in a moderately warm place, and starch will be the result.

Heat in a flask the liquid poured from the starch, and after boiling a few moments it deposits a flaky substance, which is vegetable albumen.

If starch is placed in a ladle and gently heated with constant agitation till dried up, hard, horny granules are obtained, which swell when boiling water is poured on them. These granules are called sago.

Heat in a vessel half a drachm of starch with an ounce and a half of water, stirring till it boils, and you have starch as it is used for stiffening linen.

If starch paste is allowed to stand for a length of time in a warm place, it gradually is converted into lactic acid—the same acid that gives to buttermilk its well-known sour taste.

If starch is heated over a gentle flame and constantly stirred to prevent burning, it acquires after a while a yellow and finally a brownish-yellow color, and then possesses the new property of dissolving in either cold or hot water into a mucilaginous liquid. This is called dextrine, and is used as a gum for many useful purposes. Starch gum of a white color may also be made by mixing half an ounce of starch with one drachm of water and four drops of nitric acid. Let the mixture dry in the air, and evaporate the nitric acid at a gentle heat.

Bring to brisk boiling two ounces and a half of water, to which twenty drops of sulphuric acid have been added, and then add one ounce of starch mixed with a little water, forming a paste, but only in small quantities at once, that the boiling may not be interrupted. When all the starch is stirred in, let the mixture boil for some minutes. Then add chalk to neutralize the acid, filter the liquid through porous paper, and evaporate to the consistency of a thick syrup. The starch syrup thus made, as well as the white solid starch sugar, are both articles of commerce.

It has not yet been explained how this effect is produced, but as starch, starch gum and starch sugar have each the same constitution, the difference is undoubtedly caused by a different grouping into molecules of the atoms of carbon, hydrogen and oxygen of which they are composed, which is effected by the sulphuric acid.

SIMPLE BEAUTIFIERS.

"People, like horses, must be well groomed to look well," says a practical man. Of course they must, and although a fine complexion cannot be secured by the mere outward application of cosmetics, one need not forego having a few simple aids to beauty on the toilet table. A quart bottle of rain, rose, or lavender water into which has been stirred an ounce of tincture of benzoin makes a refreshing wash for the face, which whitens the skin and prevents it from being tanned. A bottle of Jamaica rum with about ten grains of quinine in it is not unwise to have on hand to keep the hair from falling out and to promote its growth.

The camphor bottle, borax for softening hard water, cold cream for chapped hands and face are all necessary to have, and a dainty box of simple powder is quite admissible, for cunning old Dame Nature softens the gloss on the lily with downy pullen and powders the cheek of the peach, so the winsome beauty may be allowed to soften the flush on her own by the judicious use of the powder puff. All these simple beautifiers may be helpful in a small way, but no one can be beautiful or healthful without exercise. Muscles grow flabby and lose their pliancy when not used. Only the flexible body that can turn and bend and move with ease can be truly graceful.—*N. Y. Tribune.*

A USEFUL SWEEPING APRON.

I saw a few days since, a new idea for a sweeping or dusting apron. It was made of unbleached muslin. There was a hem down each side to about eighteen inches from the top, fastened on the upper edge with a brier stitch of yellow silk. Each lower corner of the apron was turned over at right angles, meeting in the centre. The hem around these corners was finished with the silk brier stitching also. The point in the centre at the bottom was turned up and secured with the stitching. Each corner was divided into two pockets by perpendicular rows of stitching. Across the top there was a hem an inch and a half in width, and through this a yellow satin ribbon was passed with long ends for strings. One can imagine the comfort and saving of time by finding the soft dust-cloth and pair of old gloves always in place in one of the pockets.

LEMONS MAKE GOOD SOAP.—Lemons are used for soap in many countries where they grow. When, for instance, the men and women of the West Indies want to wash their hands they squeeze the juice of a lemon over them briskly in water until they are clean. There is an acid in the lemon similar to that used in soap. And in countries where oranges grow in great plenty country gentlemen use the cheapest kind for blacking their boots. The orange is cut in two and the juicy side of one half is rubbed on the soot of an iron pot and then on the boot. Then the boot is rubbed with a soft brush and a bright polish at once appears.

AN excellent drink, to take the place of tea or coffee, when something warm is desired for invalids or children, is made as follows: Mix together one cupful each of flour, corn meal, graham and molasses, with enough water added to mould the dough; make into small, flat cakes, which bake until extremely brown and dry. One cake will make a cupful of drink. Pour cold water over it and let it steep twenty minutes, and sugar and cream, and you have a beverage both healthful and palatable.

A GOOD CLEANSING FLUID.—Dissolve three ounces of castile soap in one quart of warm water, then add two ounces of ether, four of ammonia, and one each of glycerine and alcohol. If the article to be cleansed is not very badly soiled, one teaspoonful of the fluid to a teacupful of warm water is about the right proportion. More may be used if necessary.

YACHTING, as a pastime for ladies, is growing in favor, year by year, though not so much here as in England, where eleven clubs last year had races on thirty-four different days.