



Children's Favorites

➤ WHEN CHILDREN come running and shouting, with the first violets clutched in their eager little fists, then we know it is really spring. Violets are not the first spring flowers to open, any more than robins are the first spring birds to appear; yet somehow their cheerful faces make us feel that this time it is spring and no mistake, no mere premature warm spell, deceiving us with false hopes. There may be more psychol-

ogy than phenology about it, but that's the way we all feel.

Violets have a good, well-won right to their place as the proper heralds of spring. For all their delicacy and tininess, they are a hardy and adaptable tribe, that have spread their blue-and-yellow banners to all the cool winds of the world. There are something more than 300 species of violets, ranging through all temperate lands of the world. They are found on mountain-tops and in desert valleys below sea-level; some species grow with their roots embedded in the wettest of swamp muck, others precariously clinging to rock shelves. Violets are often thought of as exclusively woodland flowers, yet some of the most beautiful and hardy of them are to be found among the wind-blown grasses of the open prairie. Blues, yellows and white are their natural colors; one species, *Viola tricolor*, combines all three, and in the hands of generations of plant breeders has become the familiar garden pansy.

There is one encouraging thing to be noted about violets, too, so far as children are concerned. They may pick all they like, so long as they do not pull the plants up bodily by the roots. Violets do depend a great deal on seed for their propagation, but relatively few of their seed are formed by the bright little flowers that children love to gather. After spring has passed, the plants produce a second crop of flowers on very short stems down among the bases of the leaves. These flowers, which most of us would mistake for buds, have no petals and never open. They fertilize themselves internally with their own pollen, and thus insure well-filled seed capsules.

Science News Letter, March 29, 1947

## CHEMISTRY

### Fermentation from Straw Makes Useful Chemicals

➤ INDUSTRIAL SOLVENTS, fatty acids and other useful chemicals are prepared from straw by fermentation with soil bacteria through the process on which a London inventor, Charles Weizmann, has obtained patent 2,417,801. He has found that if the bacteria are "encouraged" with easily fermentable carbohydrates, such as the starch remaining in bran, or the hexoses obtained by the partial hydrolysis of the celluloses in straw, they will act on the remaining undigested cellulose substances, with profitable results.

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## CHEMISTRY

### Pulverized Silica Gives Luster to Varnishes

➤ DESIRED LUSTER of varnishes and lacquers can be obtained with the use of a new very highly pulverized silica revealed by the Monsanto Chemical Company. The material is so fine that there are 500,000,000,000 particles in a cubic inch, it is claimed.

The improved material, known as Santocel, is technically a gloss reducing agent. The individual particles in the varnish or lacquer finish project through the surface and kill the gloss by scattering the reflected light. Not enough roughness is added, however, to affect the feel of the surface.

The silica particles are porous and sponge-like and contain 94% air, it is estimated. They are nearly uniform in size. The new product is made from an older Santocel that contained about 500,000,000 particles per cubic inch, and is made by bombarding the particles against each other with highly specialized equipment.

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