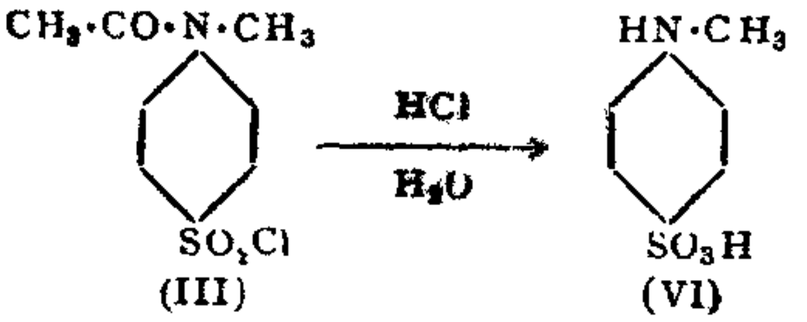

(III) (VI)

N-methyl-acetanilide (II).—**20** Gms. methyl-**aniline** (I) (b.p. 192° C.) **was** reacted with equal weight of acetic anhydride. Much heat was generated. On cooling, the mixture was poured into an equal volume of water. Methyl-acetanilide did not crystallise even on keeping in the refrigerator for several days. The aqueous layer was decanted and a few c.c. of strong ammonia were put in it, when the whole crystallized in a mass. On recrystallization from benzene, it melted at 100° C. (yield theoretical).

4-N-methyl-acetamino benzene sulphon chloride (III).—The procedure for this preparation is a slight modification of the usual method. In a 200 c.c. beaker was placed 117 gms. (10 mols.) of chlorosulphonic acid. This was cooled to — 5° C. and 14·9 gms. (1 mol.) of (II) was added in one hour. The temperature was maintained below 5° C. during the addition. The mixture was then heated for two hours at 60° C. and poured on a large quantity of crushed ice. Sulphon chloride precipitated in a yellowish mass, which settled down quickly. The acid water was decanted—the precipitate was taken up in chloroform, the solution was dried with anhydrous calcium chloride. On the removal of chloroform 24 gms. of the product were obtained (yield 50 per cent.). After several recrystallizations from benzene pure sample of (III) was obtained (m.p. 126° C.)

4-N-methyl-acetamino benzene sulphonamide (IV).—To 4·8 gms. of (III) contained in 50 c.c. Erlenmeyer flask, was added 50 c.c. of concentrated ammonia. The mixture was heated on a water-bath until a volume of 10 c.c. remained and then made neutral with dilute acetic acid. A precipitate of (IV) was obtained weighing 4 gms. (90 per cent. yield). Several crystallizations from 66 per cent. alcohol gave a sample of (IV) (m.p. 155° C.).

4-N-methyl-amino benzene sulphonamide (V).—To a solution of 2·5 gms. of (IV) in 25 c.c., absolute ethyl alcohol and 20 c.c. of concentrated hydrochloric acid was added. The resulting solution was heated for 30 minutes until a volume of 10 c.c. remained. Addition of water gave a clear solution showing complete deacetylation. It was made ammonical and a precipitate weighing 2·1 gms. (yield 85 per cent.). Successive crystallization from dilute alcohol gave a purified sample (m.p. 166° C.).

4-N-methyl-amino benzene sulphonic acid (VI).—To 2 gms. of (III) in 100 c.c. Erlenmeyer flask, was added a solution of 25 c.c. hydrochloric acid and 25 c.c. water. A clear yellow solution resulted after refluxing for a few minutes. After a further heating of 20 minutes and cooling no crystals of insoluble hydrochloride separated. On further evaporation of the solution and cooling to 0° crystals were obtained, which on recrystallization from alcohol were obtained in a purified form and decomposed at 244° C.

SUMMARY

4-N-methyl-amino benzene sulphonamide has been prepared according to the general procedure with some modifications.

2. The action of chlorosulphonic acid on methylacetanilide gave substitution in 4- position in accordance with general rule, which was confirmed by its sulphonic acid.

3. All the compounds (II), (III), (IV) and (V) are very soluble in all solvents and much caution is to be exercised in crystallizing them.

4. Contrary to expectation amide (V) was found to be a lower melting compound than (IV) which has a higher molecular weight.

Hyderabad (Dn.), HABIB HASSAN.
February 5, 1945. LAL MOHAN SRIVASTAVA.

AGRICULTURAL RESEARCH IN U.S.S.R.

ACCORDING to current information, scientific workers at the Leningrad Institute for Plant Culture who were evacuated early in the war have now returned, and the restoration of the greenhouses, laboratories, and other equipment destroyed, is under way. The experimental station is situated three miles from Pavlovsk, near Leningrad, and had given major attention to the development of improved varieties of fruits. While many of the collections were removed to Germany and the remainder neglected, seeds sent to other parts of the Soviet Union have been found to give normal results. It was expected that the autumn of 1944 and the spring of 1945 would provide farm nurseries with 100,000 strawberry cuttings, 50,000 fruit trees, 60,000 currant bushes, and many other plants while, by next summer about 3,000,000 seedlings and cuttings from fruit trees and bushes will be ready. Extensive plans for scientific research are also being made.

Reorganization and expansion are also going on at the Moscow Botanic Gardens, where it is planned to enlarge the area from 250 to 750 acres. The work is organized under sections of plant evolution, experimental ecology, cultivated plants, dendrology, horticulture and floriculture.

The Academy of Sciences has established an experiment station in Northern Siberia, known as the Mountain Targa Station. Located in the Nkrivio Kliuch Valley near the city of Voroshilovussurisky, breeding and selection programs are under way looking toward the development of better crops for cold, short-season regions, the production of hardy fruit trees and bushes, and the adaptation of local wild species to food and medicinal purposes. New methods developed at the station are said to have brought about a potato production of about 12 tons per acre in large-scale fields.
—*Experimental Station Record*, **92**, 160 (1945).