

The control plants also showed "blueing" of the petals after 2 days, in contrast to the relatively unchanged shade of the treated flowers. The treated flowers remained in the loose bud stage for 6 days and, although not wilted appreciably by this time, showed browning of the bases and margins of the petals. Some of the fragrance was lost as a result of treatments.

Azalea, grape hyacinth, iris, carnation and *Spirea Vanhouttei* were also treated, but the results were not outstanding.

As Table 1 indicates, there is a large increase in

TABLE 1
WEIGHT OF CUT FLOWERS BEFORE AND AFTER SUBMERGENCE
IN WATER FOR 20 MINUTES IN PARTIAL VACUUM

Material	Weight (grams)	
	Before treatment	After treatment
Azalea	6.00	16.2
Carnation	25.0	42.0
Grape Hyacinth (<i>Muscari botryoides</i>)	14.1	25.0
Iris	6.6	12.6
Lilac (<i>Syringa vulgaris</i>)	130.8	180.0
<i>Narcissus macimus</i>	18.3	21.3
Rose (Hybrid Tea)	75.1	109.5
<i>Rosa Hugonis</i>	21.1	40.1
<i>Spirea Vanhouttei</i>	60.0	133.8
Tulip (<i>Tulipa Gesneriana</i>)	43.0	58.0

weight following treatment. In some cases it is more than double, depending on the material. During treatment, tissues can be observed to become water-soaked and translucent. This condition disappears rapidly in some plants, as in lilaes, but more slowly in others. Since some plants are capable of taking in more water and holding it longer than others, each kind responds differently to treatment. In general, the best results were obtained with plant materials which have large leaves and stems and large inferior ovaries, capable of serving as reservoirs.

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MODIFIED METHOD OF EXTRACTING CHOLESTEROL*

MANY methods of extracting cholesterol from blood have been devised and most of the methods used for extraction from liver are based on those used for blood. The most common method used is that of Bloor,¹ which involves saponification. An interfering yellow color which reduces the accuracy of the Leibermann-Burchard determination is produced, which may be reduced by absence of heat² or the use of a red filter.³ Ireland⁴ found that the use of a red filter did not eliminate interference and devised a new method of extraction. Schoenheimer and Sperry⁵ purified the cholesterol extract by precipitation with digitonin. Foldes⁶ modified the digitonin precipitation method in order to eliminate the interference of bile. Noyons⁷ using a method similar to Bloor's¹ found that saponification gave consistent but lower values than extraction without saponification. Teeri⁸ states that extraction without saponification produced values 25 per cent. higher than extraction with saponification. Gershberg and Forbes⁹ devised an acetone and alcohol extraction method with saponification for determining cholesterol content of blood.

Most of the above methods are time-consuming and many do not give reproducible results. Therefore, a new method has been devised which reduces time and gives consistent results. The method is as follows: The liver is ground thoroughly with anhydrous sodium sulfate and three portions of 3:1 acetone-alcohol mixture—a ten cc portion followed by two five cc portions. The acetone, alcohol and liver are placed in a centrifuging tube together with 15 cc of anhydrous ether. The mixture is shaken for ten minutes, centrifuged and the supernatant evaporated in a partial vacuum under nitrogen. The cholesterol is determined by means of the Leibermann-Burchard test with the Evelyn photoelectric colorimeter.

The above method produces more consistent results than a modification of the Bloor method.

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DISCUSSION

THE EFFECT OF THIOURACIL ON TISSUE OXIDASE

WE have read with great interest the paper entitled "The Effect of Thiouracil on the Respiration of Bone Marrow and Leucocytes *in vitro*," by Dr. Charles O. Warren.¹

We have recently studied the influence of thiouracil, sulfonamides and a number of other compounds on the cytochrome oxidase (paraphenyldiamine oxidase) of the thyroid gland of the rat.² Thiouracil in

0.002 M solution added to thyroid tissue *in vitro* inhibits the oxidase activity significantly (decrease

* Contributions from the Department of Zoology, Smith College, No. 212.

¹ W. R. Bloor, *Jour. Biol. Chem.*, 17: 377, 1914.

² G. E. Sackett, *Jour. Biol. Chem.*, 64: 203, 1925.

³ W. R. Bloor, *Jour. Biol. Chem.*, 77: 53, 1928.

⁴ J. T. Ireland, *Biochem. Jour.*, 35: 283, 1941.

⁵ R. Schoenheimer and W. Sperry, *Jour. Biol. Chem.*, 106: 745, 1934.

⁶ F. Foldes, *Jour. Lab. Clin. Med.*, 28: 1889, 1943.

⁷ E. C. Noyes, *Biochem. Zeitschr.*, 289: 391, 1938.

⁸ A. E. Teeri, *Jour. Biol. Chem.*, 156: 279, 1944.

⁹ H. Gershberg and J. C. Forbes, *Jour. Lab. Clin. Med.*, 27: 1439, 1942.

¹ SCIENCE, 102: 174, August 17, 1945.