proved the appearance of the end point in all the three cases. To each lot of the halide solution, 10 c.c. of a mixture of sulphuric and phosphoric acids* and 2-3 drops of the mercurochrome indicator were added. The appearance and persistency of the pink colour marked the end point. The readings corresponded with those obtained by using potassium chromate indicator.

The advantages of the present indicator in these titrations as compared to potassium chromate are obvious.

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1. Airan, *Nature*, 19, July 1947, p. 88.

* 15 c.c. of conc. sulphuric acid and 15 c.c. of phosphoricacid were mixed, and the solution made upto 100c.c.

CHEMICAL EXAMINATION OF THE LEAVES OF *ADENANTHERA PAVONINA* LINN.

THE decoction is made from the leaves of *Adenanthera pavonina* Linn. in South India and given as a remedy for chronic rheumatism and gout. If used for any length of time it is said to be anaphrodisiac. It is regarded as useful in hæmorrhage of the bowels and hæmaturia.[1]

The chemical examination of the leaves has been carried out. The air-dried leaves (25 gms.) were extracted with solvents with the following results:

Extracts with	Residue %
Ether	14·7
Chloroform	1·028
Acetone	13·6
Alcohol	2·248
Water	26·768

Only the alcoholic extract showed the presence of an alkaloidal substance with a m.p. 88° C. A large-scale examination of the leaves to obtain the compound in quantity and in a purer form is being carried out.

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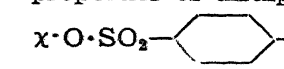
1. Watt, *Dict. of Economic Products of India*, **1**, 107–08.

SOME BENZENE 1:4-DISULPHONIC ACID ESTERS

CARR and Brown[1] have synthesised a number of *p*-alkoxy benzene sulphonic acid esters as possible local anæsthetics. Sen[2] has made a systematic study of the action of toluene sulphonyl chloride on phenols. With a view to studying the chemistry and pharmacological properties of disulphonic acid esters of the type



where x = aryl radical, benzene-1:4-disulphonyl chloride has been reacted with eleven aromatic hydroxy compounds in acetone solution in presence of sodium carbonate or diethyl-aniline and the resulting esters have been isolated and characterised. The phenolic compounds and the esters isolated along with their melting points are recorded in Table I.

TABLE I

Sl. No.	Phenol used	Product	m.p. °C.
1	Phenol	$R(C_6H_5)_2$	167–168
2	O-nitrophenol	$R(C_6H_4\text{-}NO_2)_2$	176–177
3	*p*-nitrophenol	$R(C_6H_4\cdot NO_2)_2$	240 (decomp.)
4	O-chlorophenol	$R(C_6H_4\text{-}Cl)_2$	183–184
5	*p*-chlorophenol	$R(C_6H_4\text{-}Cl)_2$	224–225
6	*m*-cresol	$R(C_6H_4\cdot CH_3)_2$	180–181
7	*p*-cresol	$R(C_6H_4\cdot CH_3)_2$	163–165
8	2:4 dinitrophenol	$R[C_6H_3(NO_2)]_2$	203–205
9	α-naphthol	$R(C_{10}H_7)_2$	175–176
10	β naphthol	$R(C_{10}H_7)_2$	219–220
11	Methone	$R(C_8H_{11}O)_2$	138–139

Full details will be published elsewhere.

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1. Carr and Brown, *J. Amer. Chem. Soc.*, 1947, **69**, 1170. 2. Sen, A. B., *J. Indian Chem. Soc.*, 1946, **23**, 383,

SOME BENZENE 1:4-DISULPHONAMIDES

IN the vastly expanding field of sulphonamides, data on nuclear substituted sulphonamides and on di- or poly-sulphonamides are meagre, consequent on their reported pharmacological inactivity.[1] But the fact that 3:5-dimethyl-sulphanilamide and aniline 3:5-disulphonamide[1] as also αα′-di-(*p*-amino-benzene sulphonamido) isopropyl alcohol[2] have some activity would indicate that search for new therapeuticals may profitably be pursued in the field of disulphonamides with basic substituents in the nucleus. As a preliminary in this programme of work, a series of unsubstituted disulphonamides of the general formula, $1:4\text{-}C_6H_4(\text{-}SO_2\text{-}NHR)_2$ (where R is alkyl, aryl or heterocyclic residue) has been prepared. Benzene-1:4-disulphonyl chloride[3] has been reacted with twenty-four amines and the products, isolated and characterised. They are all soluble in dilute alkali and can be reprecipitated by acid. The amines used and the products isolated are recorded along with their melting points in Table I.