CHAPTER IV

SUMMARY
In the present investigation the following units of work have been accomplished.

1. Sodium ethylsulphoacetate has been prepared from ethyl chloroacetate.

2. Ethyl phenylaminosulphonylacetate has been prepared from sodium ethylsulphoacetate and aniline.

3. Ethyl phenylaminosulphonylacetate has been hydrolysed to phenylaminosulphonylacetic acid.

4. Phenylaminosulphonylacetic acid has been condensed with various aldehydes to form styrene-ω-sulphonanilides.

5. The ultraviolet absorption spectra of all the styrene-ω-sulphonanilides have been recorded and analysed. All the styrene-ω-sulphonanilides exhibited a long wavelength band around 269-341 nm region. A second band exhibited around 215-221 nm region is presumably the E-band which occurs for benzene at 180 nm. The bands near 230 nm are ascribed to the partial deconjugated styryl chromophore.

6. The infrared absorption spectra of all styrene-ω-sulphonanilides have been recorded. All these compounds exhibited C=C stretching frequency bands in the region 1660-1615 cm⁻¹. All these compounds exhibited =C-H out-of-plane deformation in the region 980-950 cm⁻¹ which are characteristic of trans olefin.
These styrene-ω-sulphonanilides exhibited a characteristic absorption bands for sulphonyl group in the region 1350-1320 cm⁻¹ and 1160-1140 cm⁻¹ and N-H stretching frequency around 3280-3220 and 3080-3050 cm⁻¹.

The new compounds prepared during the present investigation were

- **trans-1-(2'-Methylphenyl)-2-(anilinesulphonyl)ethylene**, m.p. 120-121°C.
- **trans-1-(2'-Chlorophenyl)-2-(anilinesulphonyl)ethylene**, m.p. 165-166°C.
- **trans-1-(4'-Chlorophenyl)-2-(anilinesulphonyl)ethylene**, m.p. 119-120°C.
- **trans-1-(4'-Nitrophenyl)-2-(anilinesulphonyl)ethylene**, m.p. 170-171°C.
- **trans-1-(2',3'-Dimethoxyphenyl)-2-(anilinesulphonyl)ethylene**, m.p. 145-146°C.
- **trans-1-(2',5'-Dimethoxyphenyl)-2-(anilinesulphonyl)ethylene**, m.p. 124-125°C.
- **trans-1-(3',4'-Dimethoxyphenyl)-2-(anilinesulphonyl)ethylene**, m.p. 118-119°C.
- **trans-1-(Pyrene)-2-(anilinesulphonyl)ethylene**, m.p. 201-202°C.
- **trans-1-(Pipernyl)-2-(anilinesulphonyl)ethylene**, m.p. 143-144°C.