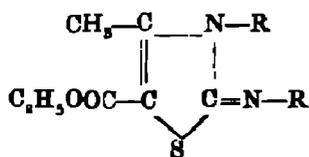


EXPERIMENTAL

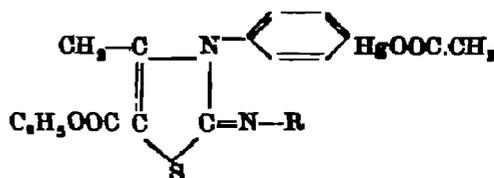
(1) *Preparation of 2-phenylimino 3-phenyl 4-methyl 5-carbethoxy-4-thiazoline (I .R-Phenyl)*. A mixture of sym-diphenyl thiourea (4.5 g) ethyl acetoacetic ester (2.5 g), iodine (5.0 g) and dry benzene (30 cc) was refluxed on a water bath for 30 hours and finally for six hours without the use of condenser. Then it was kept in contact with ether overnight with a view to remove unreacted ketone and iodine, presence of which made the product gummy. After decanting off the ether the crude product was boiled with water (50 ml). The water was decanted hot and then treated with strong ammonia to liberate the base. Many of the compounds remained gummy even after treatment with ammonia but these could be made solid by scratching the products and keeping in ammonia for longer time. The product was finally crystallised from a mixture of acetic acid, ethanol (50:50), m.p. 111–112°, yield 80% (Found: S, 9.10, C, 9.10, C₁₉H₁₈O₂N₂S requires S, 9.47).

(2) *Mercuration of 2-phenylimino 3-phenyl 4-methyl 5-carbethoxy 4-thiazoline*: The thiazoline compound (1.2 g.) dissolved in minimum amount of acetic acid, ethanol (50:50) was treated with a solution of mercuric acetate (1.0 g) in ethyl alcohol acidified with acetic acid. The mixture was stirred with a glass rod and kept 24 hours at room temperature, when a precipitate appeared. In some cases the precipitate appears after addition of a little amount of water to the mixture. The residue was then collected by filtration, washed repeatedly with hot water, and finally with ethanol and very dilute acetic acid, m. p.-187-188°, yield-82% (Found: Hg, 33.14, C₁₁H₁₁O₄N₂SHg, requires Hg, 33.55).

TABLE I



Thiazoline compounds



Acetoxy mercuric derivatives

No.	Name of R	m.p. °C	Yield %	% of Found	% of S Required	% of ger- mina- tion at 10 ppm	% of ger- mina- tion in control	m.p. °C	Yield %	% of Hg Found	% of Hg Required	% of Ger- mina- tion at 10 ppm	% of Ger- mina- tion in the control
1.	-C ₆ H ₅ -	111-112	80	9.10	9.47	29	91	187-188	82	33.14	33.55	21	95
2.	-CH ₃ C ₆ H ₄ (p)	82-83	70	8.85	8.79	39	92	> 250	75	32.90	32.05	27	95
3.	O-Cl-C ₆ H ₄	90	72	8.34	7.86	91	90	> 250	65	30.52	30.08	21	95
4.	p-Cl-C ₆ H ₄	96-97	75	7.32	7.86	17	96	175-176	75	29.67	30.08	0	94
5.	p-Br-C ₆ H ₄	86-87	80	5.95	6.45	28	97	170	65	27.04	26.39	20	90
6.	p-CO ₂ HC ₆ H ₄	188-90	60	6.94	7.51	27	94	250-251	60	28.65	29.24	24	92
7.	m-NO ₂ C ₆ H ₄	165	55	6.82	7.47	45	91	> 250	50	29.65	29.10	22	91
8.	p-NO ₂ C ₆ H ₄	200	75	7.10	7.47	72	94	242-243	55	29.81	29.10	23	90
9.	α-C ₁₀ H ₇	240	75	6.95	7.30	32	90	> 250	65	29.38	28.79	16	100
10.	β-C ₁₀ H ₇	230	80	7.51	7.30	93	88	205-206	70	28.32	28.73	17	97

Softens.

(3) *Fungicidal tests*: For fungicidal assay the method of Montgomery and Moore⁹ with a slight modification has been used. *Piricularia oryzae* (cav), the causative organism of the blast of rice has been used as the test fungus. Complete inhibition at a concentration of 100 ppm was observed in case of unmercured compounds, whereas complete inhibition at a concentration of 50 ppm was observed with the mercured derivatives. The m.p., analytical data and fungicidal assay (based on percentage of germination at 10 ppm) are shown in Table I.

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