was determined from the vertical intensity data as about 500 ft.

The anomalies due to geometric bodies of different sizes and shapes were computed, using solid-angle formulas, and it was found that anomalies resulting from a vertical cylinder of infinite depth extent with a radius of 500 ft, depth of burial of 400 ft, magnetic susceptibility of $12{,}350 \times 10^{-6}$ cgs units, and a density contrast of 0.25 most closely approximated the observed anomalies. Rock of dioritic or slightly more mafic composition but with about 4 percent magnetite enclosed in limestone or quartzite would have this susceptibility and density contrast. Since rocks of similar composition have been found in the area, postulation of such a body is reasonable. The near-circular pattern and lower northern gradient of the Draper anomaly indicate that the source is a stock-like intrusion with a northward dip rather than a local occurrence of mafic extrusive rock. The depth of burial determined is an approximation, since the body was assumed to be vertically polarized, but is not more than 1000 ft and is probably less than 500 ft.

If the source of the anomaly is an intrusion, mineralization and contact metamorphism similar to those observed elsewhere in the Salt Lake Valley may be associated with it. To determine this, additional geophysical work and/or drilling will be necessary.

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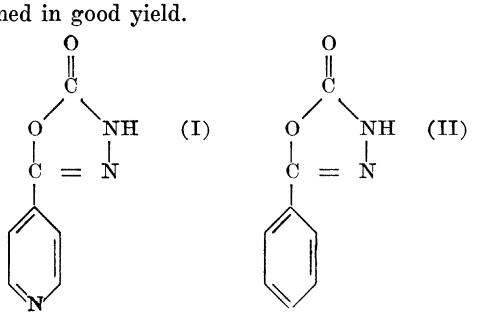
The Action of Phosgene on Acid Hydrazides to Give 1,3,4-Oxdiazolones of Interest in the Treatment of Tuberculosis

FREUND and Kuh (*1*) have described the action of phosgene under pressure and at raised temperatures on certain phenylhydrazides to give small yields of N^4-phenyl substituted 1,3,4-oxdiazolones. Dornow and Bruncken (*2*) describe a similar reaction in which certain acid and diacid hydrazides yield 1,3,4-oxdiazolones on treatment in aqueous acid solution at room temperature with phosgene [see Lieser and Nischk (*3*)].

On treating isonicotinic acid hydrazide at room temperature in an inert solvent or in aqueous acids, such as hydrochloric acid, with phosgene, the corresponding 1,3,4-oxdiazolone (I) mp 265° C (decomposition) is formed in good yield.



2-Pyridyl-(4)-1,3,4-oxidiazolone-(5)

The reaction is apparently general for this type of acid hydrazide. Benzhydrazide reacts for example, with phosgene (*3*) to give 2-phenyl-1,3,4-oxdiazolone mp 138° C (II).

(I) is, as would be expected, soluble in aqueous acids and alkalis while (II) is, of course, soluble only in alkali. (I) on prolonged hydrolysis with concentrated hydrochloric acid yields practically quantitatively isonicotinic acid, hydrazine, and carbon dioxide.

(I) showed on *in vitro* tests slightly less activity against M. tuberculosis than isonicotinic acid hydrazide. *In vivo* tests in the guinea pig infected with strain H 37 Rv showed it to be, however, somewhat more active than isonicotinic acid hydrazide, both when assessed by weight-gain curves and histological examination of the various organs. The LD_{50} (subcutaneous) of (I) was approximately one-tenth that of isonicotinic acid hydrazide when determined in the mouse and one-third that of isonicotinic acid hydrazide in the rabbit (*per os*). Chronic dosing of (I) in 4 times the therapeutic dose in the guinea pig during 2 mo showed favorable weight-gain curves and no pathological changes in any organ. Chronic toxicity tests (*per os*) in the rabbit using 10 times the therapeutic dose showed no pathological changes.

(I) and certain derivatives (*4*) are at present undergoing clinical trial. Certain derivatives of (I) show a high degree of *in vitro* activity against isonicotinic acid hydrazide resistant strains on *M. tuberculosis*.

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References and Notes

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2. A. Dornow and K. Bruncken, *Ber.* **82**, 121 (1949).
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4. Patents applied for.

Received February 10, 1954.

A Constituent of Human Perspiration with Intense Ultraviolet Absorption

GOLDRING, Hawes, Hare, Beckman, and Stickney (*1*) have reported the presence of a substance in human perspiration with intense ultraviolet absorption, capable of affecting absorbance readings if transferred to cell contents or surfaces. We wish to confirm the existence of this material for both men and women, and to describe a number of characteristics observed in a preliminary study.

Extraction experiments on small areas of skin indicated that the substance is taken up insignificantly by hydrocarbon or chlorinated solvents, to some extent by ethanol and methanol, and extremely well by water and alkaline solutions. Relatively large amounts can be collected by rinsing down the body surface with water, especially after a period of strenuous physical activity.

The rinse water, clarified by filtration through an