

ANTIPYRIN AND ITS INCOMPATIBLES.—Messrs. E. J. Millard and A. Campbell Stark give the following list of incompatibles as determined by their experiments:—

- Acid. carbolic., precipitated in strong solution.
 - Acid. hydrocyan. dil., yellow coloration.
 - Acid. nitric. dil., faint yellow coloration.
 - Acid. tannic., white, insoluble precipitate.
 - Alumen (ammonia), deep yellow coloration, fading and precipitating.
 - Amyl nitrite (acid), green coloration.
 - Arsen. iodid., precipitate.
 - Chloral hydras, precipitates in strong solution; no apparent action in dilute.
 - Cupri sulphas, solution turns green.
 - Decoc. cinchonæ, precipitates.
 - Ext. cinchon, liq., precipitates.
 - Ferri sulph., brownish-yellow color, deposits on standing, and solution turns red.
 - Glycerinum acidi carbolicæ, precipitates.
 - Glycerinum acidi tannici, precipitates.
 - Hydrarg. perchlor., precipitates, soluble in excess of water.
 - Inf. catechu conc., precipitates.
 - Inf. cinch. acid., “
 - Inf. rosæ acid., “
 - Inf. uvæ ursi., “
 - Liquor arsenii et hydrarg. iod., precipitates.
 - Liquor ferri perchlor., blood-red coloration.
 - Liquor ferri pernit. “ “
 - Liquor ferri persulph., “ “
 - Liquor potass. permang., reduction takes place quickly.
 - Sodii salicylas (solid), liquefies.
 - Spirit. ætheris nitrosi (acid), green coloration.
 - Syrup. ferri iodid., reddish-brown “
 - Tinct. catechu, precipitates.
 - Tinct. cinchonæ, “
 - Tinct. cinchon. co., “
 - Tinct. ferri perchlor., red coloration.
 - Tinct. gallæ, precipitates.
 - Tinct. gum. rubri (Eucalyptus kino), precipitates.
 - Tinct. hamamelidis, precipitates.
 - Tinct. iodi., precipitates, soluble in excess of water.
 - Tinct. kino, precipitates.
 - Tinct. laricis, “
 - Tinct. rhei, “
- Dilute Acids.*—With dilute acids no apparent change takes place, as with sulphuric, hydro-

chloric, nitric, and phosphoric acids, antipyrin forms soluble compounds (Gay and Fortuné).

Nitrites and Nitrous Acid.—The green coloration sometimes produced when antipyrin is mixed with spirit of nitrous ether, is due to the formation of the compound isonitroso-antipyrin, that is, antipyrin having an atom of hydrogen replaced by NO. By the action of the acids upon this body, a small quantity of cyanogen is produced, and it is stated that unpleasant symptoms have been traced to a mixture of antipyrin and spirit of nitrous ether. According to reporters, the compound itself is inert, and the cyanogen formed from it, by the acids of the stomach, is produced in too small a quantity to be dangerous. Isonitroso-antipyrin is only formed in the presence of free nitrous acid; a neutral spirit of nitrous ether may therefore be safely dispensed with antipyrin. But it should be remembered that the ethyl nitrite is itself speedily decomposed by water, with the formation of free nitrous acid. We would therefore recommend that the occasional practice of prescribing the two together should be discontinued. The same remarks apply to commercial amyl nitrite.

Tinctures.—We found that no precipitation in any case took place with tinctures if spirituous solution of antipyrin was employed, or if the salt was added to the tincture. The addition of water precipitated the antipyrin compound. In connection with the precipitation with astringent preparations, it should be borne in mind that antipyrin behaves with reagents exactly as an alkaloid, and is therefore precipitated by tannic acid and its congeners. The same observation applies to the astringent decoctions and infusions.

Chloral Hydrate.—The fact that chloral hydrate and antipyrin react with each other was pointed out some time ago. From a number of experiments we are of opinion that this compound of antipyrin and chloral is not appreciably formed unless concentrated solutions are employed. We conclude that the reaction is not complete in aqueous solutions, and does not appreciably take place if dilute solutions of the two bodies be employed. As the chloral-antipyrin is, according to Herr Reuter, physiologically inert, the question of its formation under the ordinary conditions likely to occur in pharmacy appears to us to be of some importance.