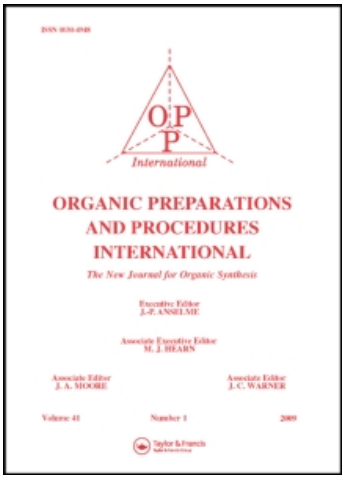

Organic Preparations and Procedures International
Publication details, including instructions for authors and subscription information:
http://www.informaworld.com/smpp/title~content=t902189982

2,4-DINITROPHENYLHYDRAZONES

D. E. Pearson[a]
[a] Department of Chemistry, Vanderbilt University, Nashville, Tennessee

To cite this Article Pearson, D. E.(1972) '2,4-DINITROPHENYLHYDRAZONES', Organic Preparations and Procedures International, 4: 1, 49
To link to this Article: DOI: 10.1080/00304947209356799
URL: http://dx.doi.org/10.1080/00304947209356799

ORGANIC PREPARATIONS AND PROCEDURES INT. 4(1), 49 (1972)

OPPI BRIEF

2,4-DINITROPHENYLHYDRAZONES

D. E. Pearson
Department of Chemistry, Vanderbilt University
Nashville, Tennessee 37203

2,4-Dinitrophenylhydrazones are obtained in higher purity by digestion with hot 10% hydrochloric acid.[1] The stock solution of the reagent is prepared by dissolving 1 g. of 2,4-dinitrophenylhydrazine in a hot solution of 10 ml. of 1:1 (v/v) of conc. hydrochloric acid-water and 10 ml. of ethanol. The hydrochloride salt of the reagent precipitates from the solution upon standing. It is redissolved by heating before removal of an aliquot. The stock solution may be stored for years although loss of acid will make redissolving difficult. This is overcome by the addition of a few drops of conc. hydrochloric acid.

The derivative is prepared by the addition of 5 drops of the carbonyl compound or 10 drops of a solution of solid carbonyl compound in 1 ml. of ethanol, to 2 ml. of hot clear (by warming) stock solution. The oil or solid hydrazone which forms immediately is separated (decantation or filtration). The oil or solid is then boiled for a few minutes with 10% hydrochloric acid and allowed to cool. This process is repeated until there is no tinge of yellow in the supernatant liquid or in the filtrate.[2] The 2,4-dinitrophenylhydrazone, thus freed from reagent, may be recrystallized from ethyl acetate, butyl acetate or methyl benzoate (in this latter case, a final thorough washing with ethyl acetate is necessary).

Notes

1. D. E. Pearson and F. Greer, J. Am. Chem. Soc., 77, 1294 (1955).

2. If the solid is the reagent itself, this process will eventually dissolve all the solid, thus indicating that the solid was not the desired hydrazone.

(Received December 6, 1971)