

UNITED STATES PATENT OFFICE

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STABLE DIAZO COMPOUND OF 5-NITRO-2-AMINO-1-METHYLBENZENE

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The present invention relates to a stable diazo compound of 5-nitro-2-amino-1-methylbenzene suitable for dyeing purposes.

In accordance with the present invention a diazo salt of 5-nitro-2-amino-1-methylbenzene of practically unlimited stability can be obtained in a simple and cheap manner by converting the respective base into its diazoniumborofluoride.

In the dyeing of textile fibers with azo-dyestuffs by development on the fiber the use of stabilized diazo compounds is simple and reliable and saves the dyer troublesome process of diazotization.

Since the combinations of diazotized 5-nitro-2-amino-1-methylbenzene and certain arylides of the 2,3-hydroxynaphthoic acid are of outstanding fastness to light and yield especially valuable red shades, the stabilizing of this diazo compound which has now been made possible is particularly important.

The short directions in the German specification No. 281,055 relating to the manufacture of certain diazoniumborofluorides are insufficient to enable one to predict, how diazo compounds, produced from 5-nitro-2-amino-1-methylbenzene (which in contradistinction to other diazo compounds, such as those of aniline, 4-chloroaniline or 4-nitraniline, are very easily decomposed) would behave towards borohydrofluoric acid; it was rather to be expected that the known ready decomposition of the diazonium chloride, sulfate, etc. produced from 5-nitro-2-amino-1-methylbenzene would be encountered again in the diazoniumborofluorides of this base.

Furthermore the diazoniumborofluoride of the 5-nitro-2-amino-1-methylbenzene is a compound possessing excellent solubility in water in contradistinction to the diazoniumborofluorides of its homologues and analogues, such as, for instance, the diazoniumborofluorides of 4-nitro-2-amino-1-methylbenzene and 4-nitro-1-amino-benzene, which are rather difficultly soluble in water and therefore unsuitable for the use as stabilized diazo compounds in dyeing processes.

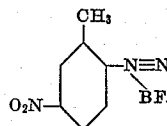
The following example will illustrate our invention, without limiting it thereto:

Example.—152 parts by weight of 5-nitro-

2-amino-1-methylbenzene and 1400 parts by weight of water and 700 parts by weight of crude hydrochloric acid are boiled for a short time. By quickly cooling down the 5-nitro-2-amino-1-methylbenzene separates out in a finely divided state and is now diazotized with 69 parts by weight of sodium nitrite at a temperature of from 0° to 10° C. The diazo salt is then precipitated from the solution by means of aqueous hydroborofluoric acid, the borofluoride is isolated in the known manner and dried. It is an almost colorless powder; the yield is nearly quantitative.

We claim:

The compound of the probable formula:



being a stable colorless powder, easily soluble in water.

In testimony whereof we have hereunto set our hands.

WINFRID HENTRICH. [L. s.]
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