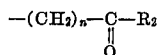


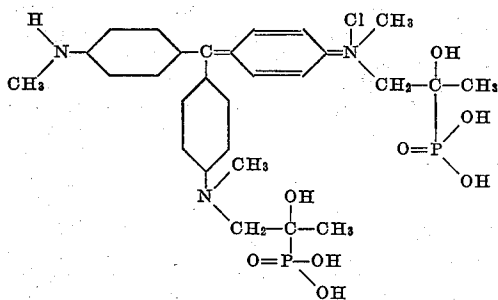
groups selected from the group consisting of an alkyl group such as methyl, ethyl, cetyl, an allyl group, a phenyl group, a furyl group, and the group



X represents an acidic radical such as chlorine, bromine, iodine, alkylsulfate, perchlorate, and the like, is phosphonated with a mixture of phosphorus trichloride and acetic acid, and the product obtained hydrolyzed to the free phospho acid derivative.

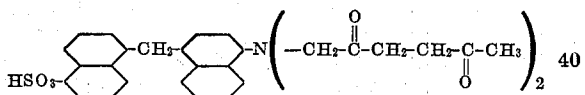
Example 4

A leuco base of the triarylmethane series such as 4,4',4''-trimethylamino-triphenylcarbinol is treated with two equivalents of α -chloro- β -hydroxy- β -phosphopropane and the product oxidized with lead peroxide in the presence of hydrochloric acid to the dye having the formula:

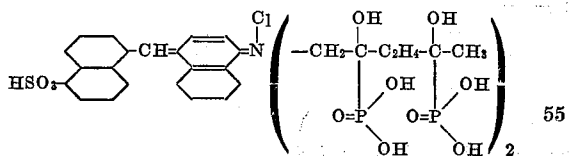


Example 5

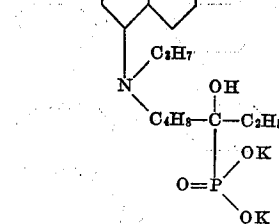
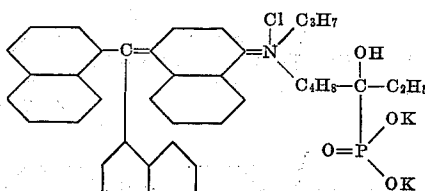
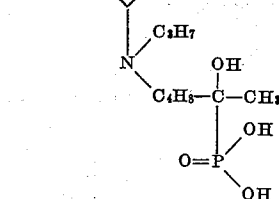
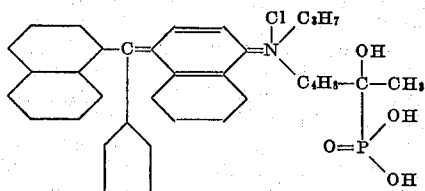
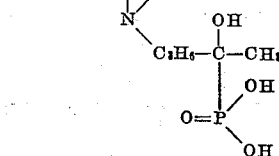
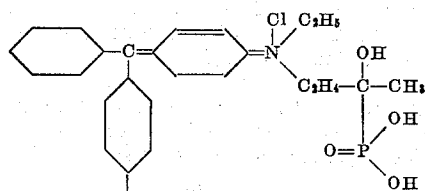
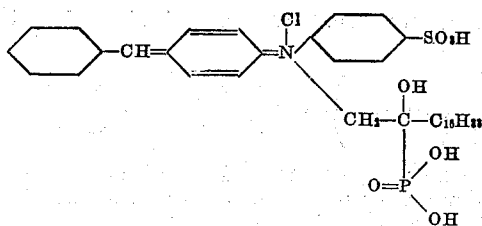
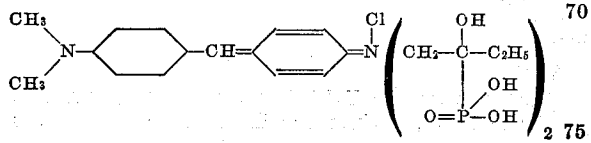
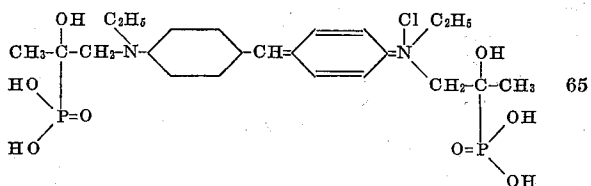
1 mole of the compound having the formula:



is heated on a water bath with approximately 4.4 molar equivalents of phosphorus trichloride in a large excess of acetic acid. The reaction product is slowly poured into water and then oxidized with lead peroxide thereby producing a green-blue solution from which the acetic acid is removed by distillation and any desired salt prepared. The compound obtained has the formula:



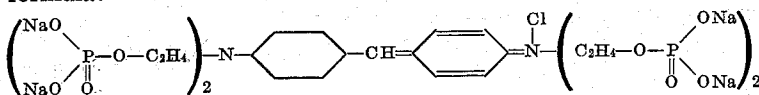
By employing the general methods of the preceding examples, there may be prepared other closely related compounds which can be represented by the following structural examples:



Example 6

1 mole of anhydro-[4,4'-bis(di- β -hydroxyethyl)amino]-diphenylcarbinol chloride is dissolved in pyridine and treated at room temperature with 650 grams of phosphorus oxychloride. After standing for a short time, the reaction mixture is heated to 70° C. for 4 hours, cooled, and then treated with 1 liter of water and sufficient sodium carbonate to neutralize all the hydrogen chloride formed in the reaction and to convert the product to the sodium salt of the phosphato acid. The pyridine and water are removed under

reduced pressure. The dye obtained has the formula:

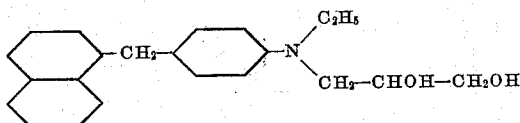


The above dye compound can also be prepared by starting with 2 moles of di-sodium phosphoethyl-aminobenzene and condensing with 1 mole of carbonyl chloride, reducing the diarylketone formed to the diarylmethane compound, and then oxidizing to the dye.

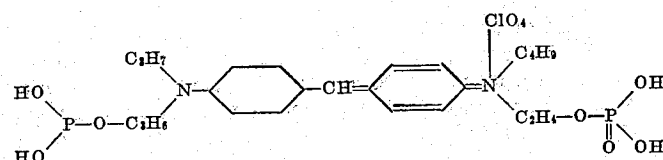
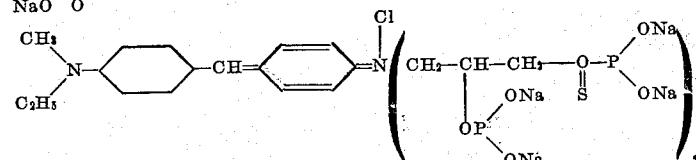
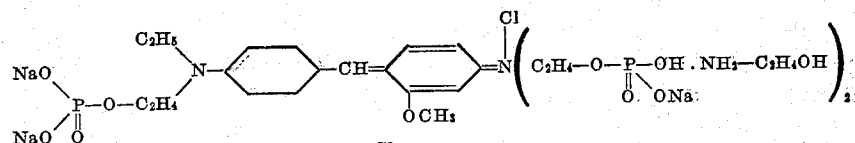
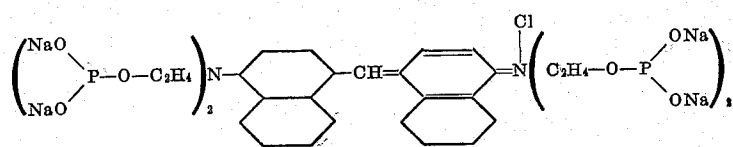
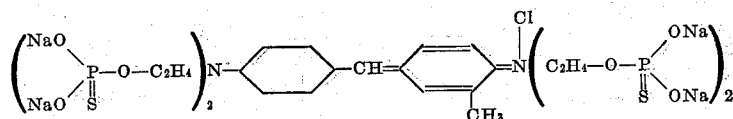
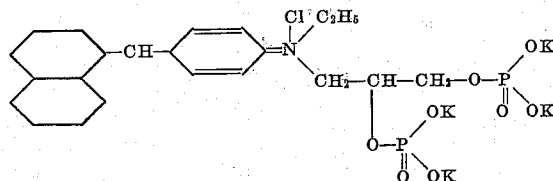
Similarly we can prepare by any of the methods just indicated in the preceding, a number of closely related diarylmethane compounds of which the following are only illustrative:

Example 7

1 mole of the compound having the formula:



is treated in pyridine with approximately 2.5 molar equivalents of phosphorus oxychloride and the reaction completed by warming. The resulting chloroester is hydrolyzed to the phosphate with an aqueous solution of potassium bicarbonate. The pyridine and water are removed under reduced pressure, the product oxidized with lead peroxide in the presence of hydrochloric acid and then treated with potassium bicarbonate. The dye obtained has the formula:



The above compounds are water-soluble, easily discharged with agents such as sodium bisulfite,

and valuable as backing dyes for antihalation layers for photographic materials.

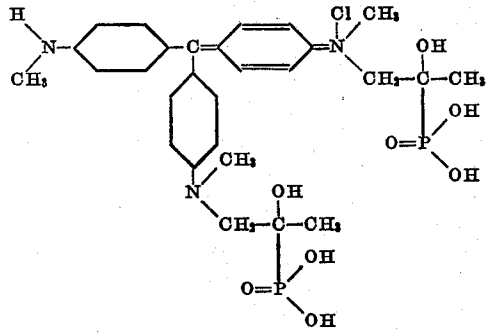
In the application of our water-soluble dyes for antihalation layers on photographic materials, the particular dyes or mixture of dyes is ordinarily applied as a composition comprising the dye and a binding agent selected from the group of substances such as gelatin, gum-arabic, dextrin, polyvinyl alcohol and similar kind of substances. A satisfactory composition, for example, is an aqueous gelatin solution of a dye or a combination of the dyes disclosed in Examples Nos. 1 to 5. Approximately 75 grams of gelatin, and up to about 10 grams of dye may be employed per 1000 ccs. of water. Alcohol or other water-miscible organic solvents may be added in appropriate amount to the solution, as desired, in order to promote the adherence of the composition to the support and to facilitate its drying. In some cases, it may be desirable to add to the composition a small amount of a water-miscible high boiling compound such as glycerine, an alkylene glycol, or a higher alcohol sulfate such as sodium oleyl sulfate. As a photographic support there can be employed a transparent sheet comprising an organic derivative of cellulose including cellulose nitrate, cellulose acetate, cellulose propionate, cellulose butyrate, cellulose acetate-propionate, cellulose acetate-butylate, methyl cellulose, ethyl cellulose, benzyl cellulose, polyvinyl acetals, viscose and the like, as well as transparent or translucent glass plates. The composition is customarily applied as a coating on the rear surface of the support, but can also be applied on the front surface as an interlayer over which the light-sensitive emulsion is coated, or, it can be applied as an overlayer coated upon the emulsion layer, in which case

the exposure to light is usually made through the support. While the invention is illustrated

more particularly in connection with antihalation layers on transparent supports, it will be understood that such antihalation layers can also be employed as interlayers on opaque materials such as pigmented sheets or photographic papers. 5

We claim:

The polyarylmethane compound having the formula:



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