ABSTRACT

COMPOSITIONS AND METHODS OF MAKING A CHLORIN E6 DERIVATIVE AS A PHOTOACTIVE AGENT

An improved two stage reaction process for production of mono-L-aspartyl chlorin e6. In a first stage, the activation reaction between chlorin e6 and a carbodiimide produces a previously unknown anhydride in an activation reaction product. This reaction product is purified to remove a significant proportion of the precursors of di-L-aspartyl chlorin e6. The purified activation reaction product contains a higher concentration of the previously unknown anhydride. This purified reaction product is used in a second stage: a coupling reaction of the purified activation reaction product with aspartate. The coupling reaction produces a coupling reaction product that has significantly reduced di-L-aspartyl chlorin e6 concentration. This reduced di-L-aspartyl chlorine e6 concentration facilitates purification of mono-L-aspartyl chlorin e6 from the coupling reaction mixture.

Fig. 4