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PDF文档

海藻糖对膜脂液晶相到六角相变温度的影响

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应用荧光偏振技术，差示扫描量热技术（Differential Scanning Calorimetry,DSC），傅立叶变换红外光谱技术（Fourier－transformin frared spectroscopy,FTIR）等检测手段，通过测定磷脂液晶相到六角相(Lα→H_{II})的相变温度来研究不同浓度的海藻糖对水化棕榈油酰磷脂酰乙醇胺(L－α－phosphatidylethanolamine，β－oleoyl－γ－palmitoyl，POPE)的脂多型性的影响。发现海藻糖存在时，在30℃－70℃温度范围内H_{II}相相变消失，表明海藻糖有稳定脂质体于双层相的能力。

THE EFFECT OF TREHALOSE ON THE PHASE TRANSITION TEMPERATURE OF HEXAGONAL PHASE OF LIPID

In this paper,the effect of trehalose on the polymorphism of hydratedPOPE(L-α-phosphatidylethanolamine，β-oleoyl-γ-palmitoyl) was studied by monitoring the phase transition temperature of hexagonal phase (Tbh).Fluorescence anisotropy,FTIR (Fourier-transform infrared spectroscopy),and DSC(Differential Scanning Calorimetry) were used to measure the Tbh.The experimental results showed that trehalose can inhibit the Lα → H_{II} phase transition of the hydrated POPE,thus stabilized the lipid membrane in a planar form.

关键词

液晶相到六角相相变(L_{α} → H_{II})；海藻糖(Trehalose)；相变温度(Phase transition temperature)；POPE