

## アルブミン製剤におけるN-アセチル-メチオニンの 新規添加剤としての役割

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### **The role of N-acetyl-methioninate as a new stabilizer for albumin products**

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**ABSTRACT:** Sodium octanoate (Oct) and N-acetyl-L-tryptophanate (N-AcTrp) are widely used as stabilizers during the pasteurization of albumin products. However, N-AcTrp has a possible side effect of intracerebral disease. To provide safe and risk-free albumin products, we validated N-acetyl-methioninate (N-AcMet) as a new stabilizer for albumin products. The effect of N-AcMet on oxidation was examined using AAPH as an oxidizing agent. Carbonyl content in the presence of N-AcMet, as well as that in the presence of N-AcTrp after 24h (Anraku et al., 2004), was significantly decreased. The effect of AAPH on the oxidative status of 34-Cys on human serum albumin was also studied by HPLC. It was found that N-AcMet as well as N-AcTrp, has a large protective effect on the sulfhydryl group after 1h. Further, N-AcMet was found to be a superior radical scavenger to N-AcTrp using 1,1'-diphenyl-2-picrylhydrazyl (DPPH) radicals. In the present study, we suggest that use of N-AcMet in albumin preparation is safe and free of risk of side effects.

**抄録** アルブミン製剤には安定化剤として、カプリル酸とN-アセチルトリプトファン (N-AcTrp) が添加されている。N-AcTrp は、抗酸化剤としての機能も持つが、その過剰摂取により、脳症などの副作用が懸念される。そこで、N-AcTrp の代替添加剤として、N-アセチル-メチオニン (N-AcMet) の安定化剤としての役割を検討した。その結果、N-AcTrp と同様の抗酸化作用を示し、今後、アルブミン製剤の添加剤として、副作用のない代替物として期待される。

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