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(12) **United States Patent**  
**Jiang et al.**

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(54) **LEVOTHYROXINE FORMULATIONS**

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- (\* ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.  
  
This patent is subject to a terminal disclaimer.

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(51) **Int. Cl.**  
**A61K 31/198** (2006.01)  
**A61K 47/26** (2006.01)  
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CPC ..... **A61K 31/198** (2013.01); **A61K 9/0019** (2013.01); **A61K 9/19** (2013.01); **A61K 47/02** (2013.01); **A61K 47/10** (2013.01); **A61K 47/26** (2013.01)

(58) **Field of Classification Search**  
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IPC ..... **A61K 31/198**, **47/26**, **9/0019**, **9/19**  
See application file for complete search history.

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(57) **ABSTRACT**  
A levothyroxine composition includes levothyroxine sodium and mannitol. The composition is a lyophilized solid. The composition may include from 100 to 500 micrograms levothyroxine sodium and from 2 to 4 milligrams mannitol.

**30 Claims, 3 Drawing Sheets**

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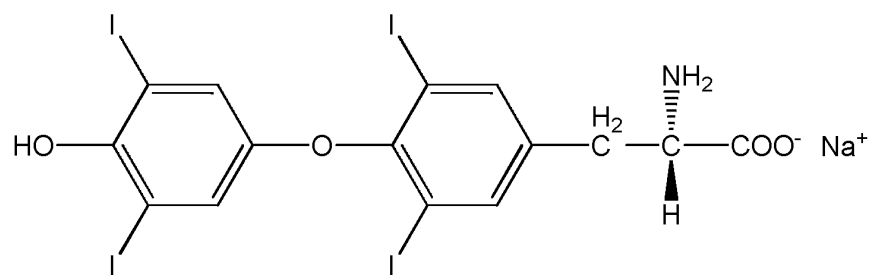


FIG. 1

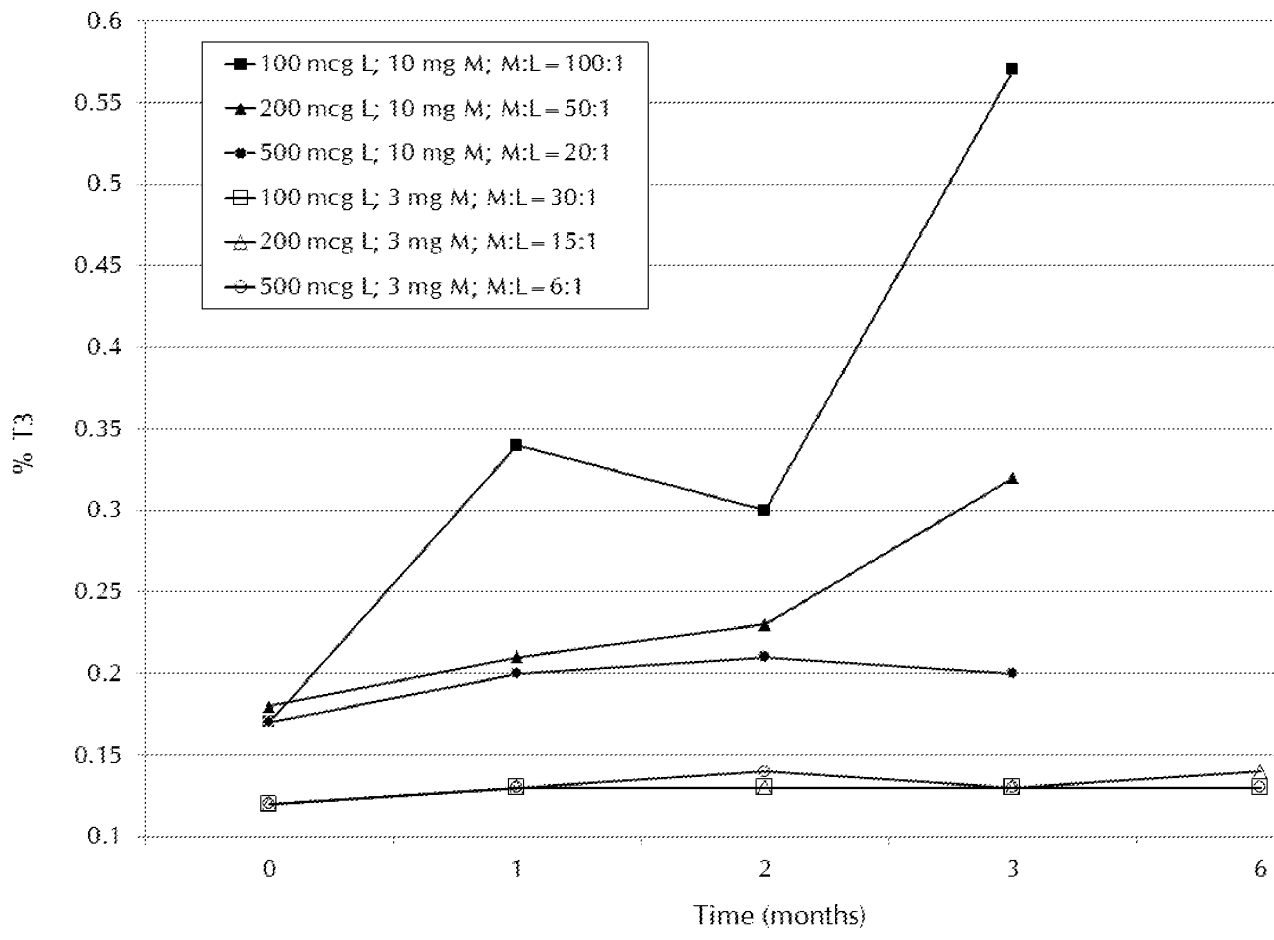


FIG. 2

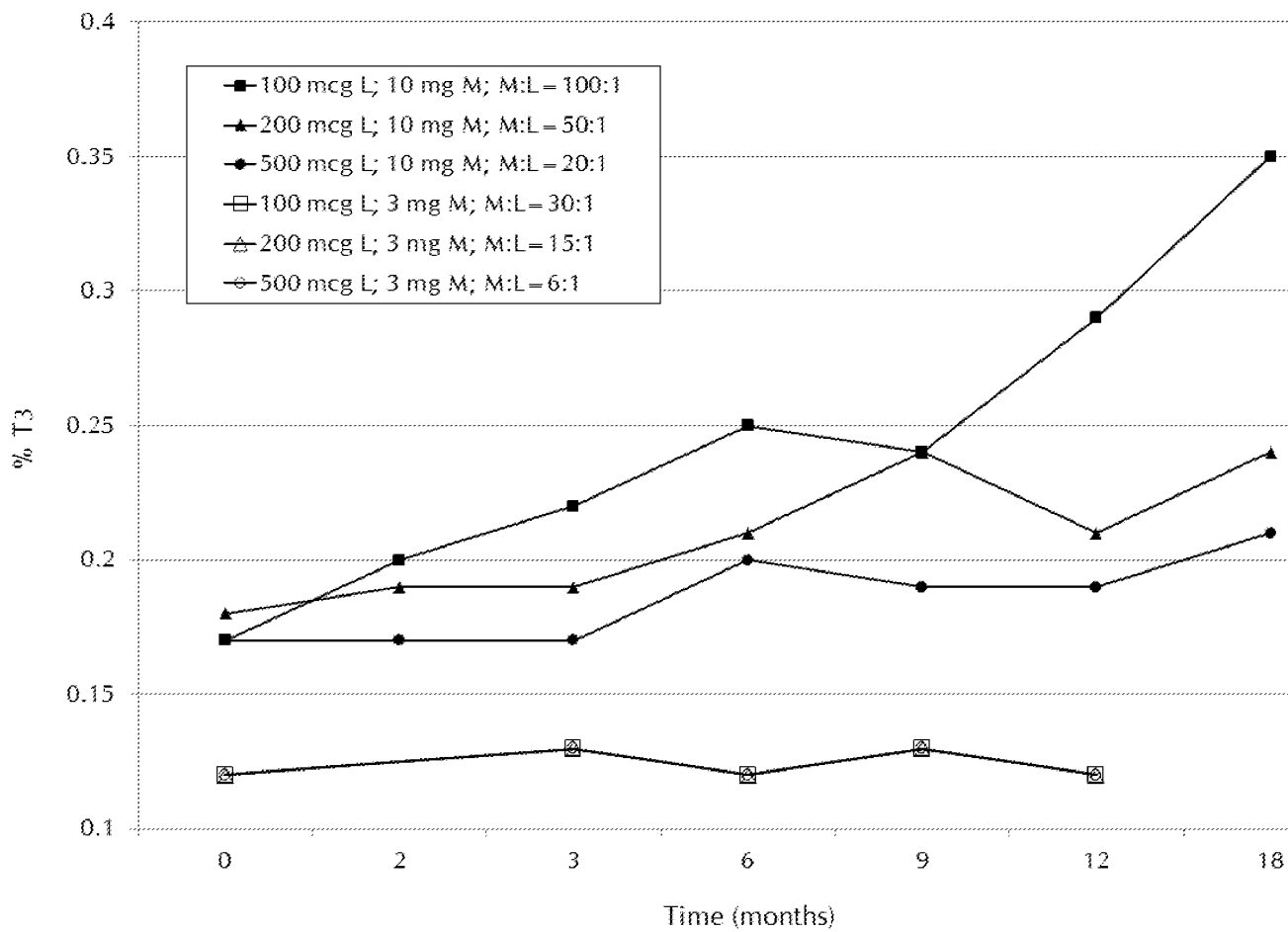


FIG. 3

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