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(54) **STABLE, HIGHLY PURE L-CYSTEINE COMPOSITIONS FOR INJECTION AND METHODS OF USE**

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(71) Applicant: **Exela Pharma Sciences, LLC**, Lenoir, NC (US)

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(72) Inventors: **John Maloney**, Salisbury, NC (US);
Aruna Koganti, Lenoir, NC (US);
Phanesh Koneru, Waxhaw, NC (US)

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(73) Assignee: **Exela Pharma Sciences, LLC**, Lenoir, NC (US)

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(74) *Attorney, Agent, or Firm* — Alston & Bird LLP

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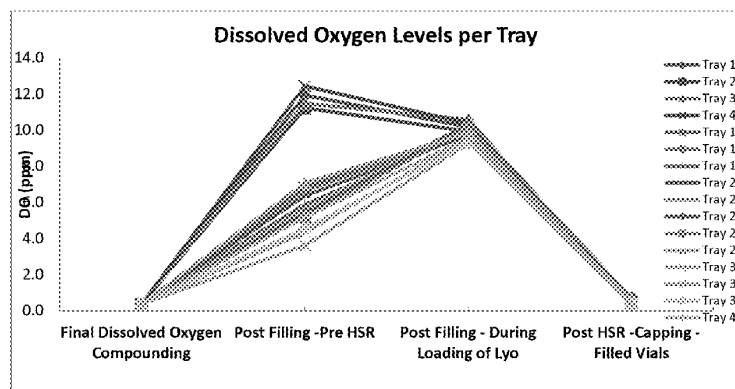
(57) **ABSTRACT**

The subject matter described herein is directed to stable L-cysteine compositions for injection, comprising: L-cysteine or a pharmaceutically acceptable salt thereof and/or hydrate thereof in an amount from about 10 mg/mL to about 100 mg/mL; Aluminum in an amount from about 1.0 parts per billion (ppb) to about 250 ppb; cystine in an amount from about 0.01 wt % to about 2 wt % relative to L-cysteine; pyruvic acid in an amount from about 0.01 wt % to about 2 wt % relative to L-cysteine; a pharmaceutically acceptable carrier, comprising water; headspace O₂ that is less than 1.0%; dissolved oxygen present in the carrier in an amount from about 0.01 parts per million (ppm) to about 1 ppm, wherein the composition is enclosed in a single-use container having a volume of from 10 mL to 100 mL. Also described are compositions for a total parenteral nutrition regimen and methods for their use.

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