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(पेटेंट नियमावली का नियम 74) (Rule 74 of The Patents Rules)

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फाइल करने की तारीख / Date of Filing 30/12/2021

पेटेंटी / Patentee : Indian Council of Agricultural Research- Indian Institute of Rice Research

प्रमाणित किया जाता है कि पेटेंटी को, उपरोक्त आवेदन में यथाप्रकटित **METHOD FOR PREPARATION OF STABILIZER-FREE SILICIC ACID FOR FOLIAR APPLICATION AND FORMULATION THEREOF**

नामक आविष्कार के लिए, पेटेंट अधिनियम, 1970 के उपबंधों के अनुसार आज तारीख दिसम्बर 2021 के तीसवें दिन से बीस वर्ष की अवधि के लिए पेटेंट अनुदत्त किया गया है।

It is hereby certified that a patent has been granted to the patentee for an invention entitled **METHOD FOR PREPARATION OF STABILIZER-FREE SILICIC ACID FOR FOLIAR APPLICATION AND FORMULATION THEREOF** as disclosed in the above mentioned application for the term of 20 years from the

30th day of December 2021 in accordance with the provisions of the Patents Act,1970.



(Signature)
इकांत की शंख

अनुदान की तारीख : 16/08/2024
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टिप्पणी - इस पेटेंट के नवीकरण के लिए फीस, यदि इसे बनाए रखा जाना है, दिसम्बर 2023 के तीसवें दिन को और उसके पश्चात प्रत्येक वर्ष में उसी दिन देय होगी।
Note - The fees for renewal of this patent, if it is to be maintained, will fall / has fallen due on 30th day of December 2023 and on the same day in every year thereafter.

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Patent Search

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Abstract:

The present invention comprises a two part systems and relates to a method for achieving non-colloidal silicic acid solution through mixing of these two parts system resulting solution of non-colloidal silicic acid, within 72 hours, is further diluted for foliar spray on crops. The two compositions are part A and part B wherein Part A is acid composition having a pH in the range of 0.1 to 0.5, and contains a mineral acid the concentration of which can vary in the range of 1% to 30%, preferably 5% to 2 B is an aqueous alkali solution having a pH of from about 12 to 14 and a water content of at least about 70% by weight and wherein Part B contains solubilised silica i from 1% to 20%, preferably 2% to 15% with silica to alkali oxide ratio from 1.5 to 3.5.

Complete Specification

Claims:We Claim:

1. A silicic acid formulation for foliar application, comprises of a two-part system including part A and part B, wherein
 - (a) Part A is an aqueous acidic solution having a pH of from about 0.1 to about 0.5 containing from 0.05% by weight to 30% by weight of mineral acid, from 0.1% to 5 weight of inorganic micronutrients, and at least 70% by weight water; and
 - (b) Part B is an aqueous alkaline solution having a pH of from about 12 to 14 containing from 0.3% by weight to 20% by weight of silica in soluble form, and from 0.1 weight to 12% by weight of alkali metal oxide.
2. The formulation as claimed in claim 1, wherein the mineral acid of Part A is selected from the group consisting of sulfuric acid, hydrochloric acid, nitric acid, phosphoric acid, and mixtures thereof.
3. The formulation as claimed in claim 1, wherein the inorganic micronutrients of Part A is selected from the group consisting of zinc, copper, manganese, magnesium, molybdenum.
4. The formulation as claimed in claim 1, wherein the alkali metal oxide of Part B is selected from the group of sodium oxide, potassium oxide, and mixture thereof.
5. A method for preparation of stabilizer free non-colloidal silicic acid formulation for foliar application, wherein the method comprising the steps of:
 - a) Providing separately aqueous acidic solution as Part A, and silica solution as Part B
 - b) Adding slowly the Part B silica solution to equal volume of Part A acidic solution with stirring to provide strongly acidic silicic acid solution
 - c) Instantly diluting the strongly acidic silicic acid solution for foliar application having desirable silicon content as silicic acid

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