

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Stoller, et al.

TITLE: NON-AQUEOUS SOLUTION OF PLANT-GROWTH REGULATOR(S)
AND POLAR AND/OR SEMI-POLAR SOLVENT(S)

SERIAL NO: 14/995,434

FILED: 01/14/2016

EXAMINER: Brown, Courtney

GROUP AU: 1617

Mail Stop Amendments
Commissioner of Patents
PO Box 1450
Alexandria, VA 22313-1450

SECTION 132 DECLARATION

I, Ritesh Sheth, do hereby declare as follows:

I am a named inventor of the above-identified patent application (“the present application”).

1. I am familiar with US published application 2008/0039322 (Wang).

Applicant’s invention is a non-aqueous solution comprising a PGR mixture in organic solvent(s). As such, our invention does not include any acid solubilizers such as citric acid, tartaric acid or glycolic acid. Such acids are known to degrade the Applicant’s claimed PGRs.

During the course of developing the current invention, we conducted several experimental trials in order to produce a stable formulation. During these trials, we added acid to the formulation and found it wholly unsuitable for the present non-aqueous solution because of degradation of the PGRs (specifically gibberellins).

As is known in literature, the maximum solubility of citric acid is approximately 10% in propylene glycol and 15% in ethyl alcohol. Addition of citric acid to the Applicant’s invention at rates as high as 10-15% and as low as 0.1% resulted in complete loss of gibberellins and significant loss of auxins within 1 day of the accelerated stability test at

54°C. The extent of loss of both auxins and gibberellins was greatly influenced by the amount of acid added and the concentration of PGRS in solution. Similar effect can be seen when other acids (both Bronsted and Lewis) acids are also added to the solution.

4. I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: 21 April 2017

/Ritesh Sheth/.

Ritesh Sheth