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(71) Applicant: **FUJIFILM DIOSYNTH BIOTECH-
NOLOGIES UK LIMITED** [GB/GB]; Belasis Avenue,
Billingham TS23 1LH (GB).

(72) Inventor: **NAGY, Tibor**; Belasis Avenue, Billingham
TS23 1LH (GB).

(74) Agent: **REVELL, Christopher**; FUJIFILM Imaging Col-
orants Limited, 6th Floor, Acresfield, 8-10 Exchange Street,
Manchester M2 7HA (GB).

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(54) Title: METHOD FOR PREPARING AQUEOUS SOLUTIONS OF A DEFINED PH

(57) Abstract: A method for preparing an aqueous solution of a defined pH comprising an acid, a base and optionally one or more additives is provided. The method comprises the steps of: a) calculating the theoretical concentrations of acid and base for the solution to have the defined pH using the Henderson-Hasselbach equation in combination with the Debye Huckel theory for a range of different additive concentrations; b) preparing a sample of the buffer for the range of additive concentrations and measuring the actual pH for each additive concentration; c) calculating a value for delta pH, ΔpH , being the difference between the theoretical pH and the actual pH, for each additive concentration; d) generating a mathematical model describing the relationship of ΔpH with additive concentration; e) selecting the defined pH and additive concentrations; f) using the mathematical model generated in step d) to calculate ΔpH for the defined pH and additive concentration; g) calculating a ΔpH -corrected pH by summing the defined pH and delta pH; h) using the ΔpH -corrected pH to calculate the concentrations of acid and base using the Henderson-Hasselbach equation in combination with the Debye Huckel theory; i) preparing the solution using the concentrations calculated in step h).

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