

Hydrolysed Proteins

DOCUMENT N4

RELEVANCE OF METABOLITES IN GROUNDWATER

Version history¹

Date	Data points containing amendments or additions and brief description	Document identifier and version number

¹ It is suggested that applicants adopt a similar approach to showing revisions and version history as outlined in SANCO/10180/2013 Chapter 4 How to revise an Assessment Report

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1 INTRODUCTION

Hydrolysed proteins are naturally occurring compounds of degradation from the hydrolysis of living organisms' tissues that can have vegetable or animal origin. The degradation of the hydrolysed proteins results in more simple metabolites called amino acids. Proteins and amino acids are abundant organic molecules in living cells. They can be found in every single cell, since they are fundamental in all aspects of the cell structure and function, and intervene in the most essential biochemical processes.

The proteins are one of the three basic principal nourishment of living beings. Their digestive apparatus hydrolyses the proteins and the amino acids are used by the living cells to build up their own proteins.

Thus, the hydrolysed proteins are biodegradable, so their persistence in the environment is very short without any tendency for bioaccumulation.

Due to the nature of the hydrolysed proteins and their characteristics regarding the fate and behaviour in the environment, it is deemed very unlikely the existence of relevant metabolites resulting from applications as plant protection product in the soil, surface water or sediment and even more unlikely the existence of relevant metabolites reaching the groundwater.

2 FATE AND BEHAVIOUR IN THE ENVIRONMENT

2.1 Summary of Degradation pathway in Soil

Not relevant. Please refer to point 1.

2.2 Summary of Identification of Metabolites in Soil

Not relevant. Please refer to point 1.

3 RELEVANCE OF METABOLITES IN GROUNDWATER

3.1 Step 1: Exclusion of Degradation Products of No Concern

Not relevant. Please refer to point 1.

3.2 Step 2: Quantification of Potential Groundwater Contamination

Not relevant. Please refer to point 1.

3.3 Step 3: Hazard Assessment: Identification of relevant metabolites

3.3.1 Step 3, Stage 1: Screening for biological activity

Not relevant. Please refer to point 1.

3.3.2 Step 3, Stage 2: Screening for genotoxicity

Not relevant. Please refer to point 1.

3.3.3 Step 3, Stage 3: Screening for toxicity

Not relevant. Please refer to point 1.

3.4 Step 4: Exposure assessment – threshold of concern approach

Not relevant. Please refer to point 1.

3.5 Step 5: Refined risk assessment for non-relevance of metabolites

Not relevant. Please refer to point 1.

3.6 Overall Conclusion

Not relevant. Please refer to point 1.

4 REFERENCES

Not relevant.