TECHNICAL REPORT

Outcome of the consultation with Member States and EFSA on the basic substance application for *Salix alba* bark and the conclusions drawn by EFSA on the specific points raised[1]

European Food Safety Authority[2]

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ABSTRACT

The European Food Safety Authority (EFSA) was asked by the European Commission to provide scientific assistance with respect to the evaluation of applications received by the European Commission concerning basic substances. In this context EFSA's scientific views on the specific points raised during the commenting phase conducted with Member States and EFSA on the basic substance application for *Salix alba* bark are presented. The context of the evaluation was that required by the European Commission in accordance with Article 23 of Regulation (EC) No 1107/2009 following the submission of an application for approval of *Salix alba* bark as a basic substance. The current report summarises the outcome of the consultation process organised by the EFSA and presents EFSA's scientific views on the individual comments received.

KEY WORDS

Salix alba bark, basic substance, application, consultation, plant protection, pesticide

[1] On request from the European Commission, Question No EFSA-Q-2014-00150, approved on 3 June 2014.

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Suggested citation: European Food Safety Authority, 2014; Outcome of the consultation with Member States and EFSA on the basic substance application for *Salix alba* bark and the conclusions drawn by EFSA on the specific points raised. EFSA supporting publication 2014:EN-609. 34 pp.

Available online: www.efsa.europa.eu/publications

SUMMARY

Salix alba bark is an active substance for which in accordance with Article 23(3) of Regulation (EC) No 1107/2009 the European Commission received an application from the Institut Technique de l'Agriculture Biologique (ITAB) for approval as a "basic substance". Regulation (EC) No 1107/2009 introduced the new category of "basic substances", which are described, among others, as active substances, not predominantly used as plant protection products but which may be of value for plant protection and for which the economic interest of applying for approval may be limited. Article 23 of Regulation (EC) No 1107/2009 lays down specific provisions for consideration of applications for approval of basic substances.

In March 2013 the European Commission requested the European Food Safety Authority (EFSA) to provide scientific assistance with respect to the evaluation of applications received by the European Commission concerning basic substances. By a further specific request, received from the European Commission on 25 February 2014, EFSA was asked to organize a commenting on the basic substance application for *Salix alba* bark, to consult the applicant on the comments received, and to deliver its scientific views on the specific points raised in the format of a Reporting Table within 3 months of acceptance of the specific request.

A consultation on the basic substance application for *Salix alba* bark, organised by the EFSA, was conducted with Member States and EFSA via a written procedure in November 2013 – January 2014. Subsequently the applicant was invited to address the comments received in the format of a Reporting Table, within a period of 30 days.

The current report summarises the outcome of the consultation process organised by the EFSA on the basic substance application for *Salix alba* bark and presents EFSA's scientific views on the individual comments received in the format of a Reporting Table.

It is unclear what the specification of the basic substance is. In the application it is whole plant material or bark or powdered bark, wet or dry. The supporting methods are not well described and are not validated.

The intended use is on peach, apple and grape vine for the control of various plant diseases. It is proposed that its mode of action is based on the high percentage of salicylic acid in the plant that works on lowering the impact of moisture. It also acts as an activator of plant defences mechanisms.

The Regulation states the following that for something to be a basic substance: 'It is not predominantly used for plant protection purposes but nevertheless is useful in plant protection either directly or in a product consisting of the substance and a simple diluent'. This is not the case for this material as it is extracted at 80 ^{o}C for 2 hours and then the pH is adjusted. This means that it is being formulated and is not a basic substance. It is rather a plant extract and separate guidance is being prepared for these substances.

As for the mammalian toxicology section, several substances mentioned to be constituents of *Salix alba* bark have pharmacological properties (e.g. teratogenic potential of salicylates or skin sensitisation). Therefore *Salix alba* bark does not comply with Article 23(1)a to be approved for use as a basic substance. In addition, the non-dietary risk assessment is inconclusive (lack of reference values and of an exposure assessment).

Since a clear characterisation and the toxicological properties of several constituents of *Salix alba* bark were not addressed, a qualitative and quantitative consumer risk assessment could not be performed.

Information was not provided in the environmental fate and behaviour section that would enable an environmental exposure assessment to be carried out. Furthermore, due to missing information on the exact identity of *Salix alba* bark, a qualitative and quantitative exposure assessment of the components

introduced into the environment following the application of *Salix alba* bark for plant protection is not possible.

The available ecotoxicological risk assessments are not considered sufficient to address the risk to non-target organisms (birds, mammals, aquatic organisms, honey bees, non-target arthropods, earthworms, soil microorganisms and non-target plants).

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BACKGROUND AS PROVIDED BY THE EUROPEAN COMMISSION

Regulation (EC) No 1107/2009[3] (hereinafter referred to as 'the Regulation') introduced the new category of "basic substances", which are described, among others, as active substances, not predominantly used as plant protection products but which may be of value for plant protection and for which the economic interest of applying for approval may be limited. Article 23 of the Regulation lays down specific provisions to identify a substance as a basic substance with a view to ensure that such active substances that do not have an immediate or delayed harmful effect on human and animal health nor an unacceptable effect on the environment can be approved as "basic" and used for plant protection purposes.

Salix alba bark is an active substance for which, in accordance with Article 23(3) of the Regulation, the European Commission received an application from the Institut Technique de l'Agriculture Biologique (ITAB) for approval as a "basic substance".

The European Food Safety Authority (EFSA) organised a consultation with Member States and EFSA on the basic substance application for *Salix alba* bark, which was conducted via a written procedure in November 2013 – January 2014. The comments received were collated by EFSA in the format of a Reporting Table. Subsequently, the applicant was invited to address the comments in column 3 of the Reporting Table. The comments received and the response of the applicant thereon, together with the application submitted by the applicant, were considered by EFSA in column 4 of the Reporting Table.

The current report aims to summarise the outcome of the consultation process organised by the EFSA on the basic substance application for *Salix alba* bark and to present EFSA's scientific views on the individual comments received in the format of a Reporting Table.

The application and, where relevant, any update thereof submitted by the applicant for approval of *Salix alba* bark as a "basic substance" in the context of Article 23 of the Regulation, is a key supporting documentation, therefore it is considered as a background documentation to this report and will also be made publicly available, excluding its appendices (ITAB, 2013 and ITAB, 2014).

TERMS OF REFERENCE AS PROVIDED BY THE EUROPEAN COMMISSION

On 6 March 2013 the European Commission requested the EFSA to provide scientific assistance with respect to the evaluation of applications received by the European Commission concerning basic substances. By a further specific request, received by EFSA on 25 February 2014, EFSA was asked to organise a commenting on the basic substance application for *Salix alba* bark, to consult the applicant on the comments received, and to deliver its scientific views on the specific points raised in the format of a Reporting Table.

To this end, a Technical Report containing the finalised Reporting Table is prepared by EFSA. The agreed deadline for providing the finalised report is 3 June 2014.

On the basis of the Reporting Table, the European Commission may decide to further consult EFSA to conduct a full or focussed peer review and to provide its conclusions on certain specific points.

[3] Regulation (EC) No 1107/2009 of the European Parliament and of the Council of 21 October 2009 concerning the placing of plant protection products on the market and repealing Council Directives 79/117/EEC and 91/414/EEC. OJ No L 309, 24.11.2009, p. 1-50.

EVALUATION

The comments received on the basic substance application for *Salix alba* bark and the conclusions drawn by the EFSA are presented in the format of a Reporting Table.

The comments received are summarised in column 2 of the Reporting Table. The applicant's considerations of the comments, where available, are provided in column 3, while EFSA's scientific views and conclusions are outlined in column 4 of the table.

The finalised Reporting Table is provided in the Appendix to this report.

DOCUMENTATION PROVIDED TO EFSA

1. ITAB (Institut Technique de l'Agriculture Biologique), 2013. *Salix alba* bark. Basic substance application submitted in the context of Article 23 of Regulation (EC) No 1107/2009. September 2013. Submitted by ITAB (Institut Technique de l'Agriculture Biologique). Documentation made available to EFSA by the European Commission.

2. ITAB (Institut Technique de l'Agriculture Biologique), 2014. *Salix alba* bark. Basic substance application update submitted in the context of Article 23 of Regulation (EC) No 1107/2009. February 2014. Submitted by ITAB (Institut Technique de l'Agriculture Biologique). Documentation made available to EFSA by the applicant.

APPENDIX

COLLATION OF COMMENTS FROM MEMBER STATES AND EFSA ON THE BASIC SUBSTANCE APPLICATION FOR *SALIX ALBA* BARK AND THE CONCLUSIONS DRAWN BY EFSA ON THE SPECIFIC POINTS RAISED

1. Purpose of the application

General				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application
1(1)		DE: The fungicidal activity of the extract of *Salix alba* has been used in agriculture long before as pointed out in the chapter 3.2 of the report (*"The traditional hot water extract from Salix alba has long been used by organic and biodynamic farmers."*). The extract seems to be not predominantly used for plant protection purposes. However, the extracts clearly show a fungicidal activity and has also a long history as fungicidal substance in agriculture. From our point of view it is not fully reasonable why this biologically active plant extract/ pharmaceutical can be regulated as basic substance whereas other plant extracts with a long history of use as pharmaceutical are regulated as active substance (e.g. Neem extract – azadirachtin). It seems more consistent to consider a regulation as botanical a.i. but with reduced data requirement rather than as basic substance. If regulated as	Chinese physicians have used willow to relieve pain since ancient times, but it took 2,000 years for this use to catch on in the West -- an event that occurred almost by accident. The use of willow bark dates back thousands of years, to the time of Hippocrates (400 BC) when patients were advised to chew on the bark to reduce fever and inflammation. Willow bark has been used throughout the centuries in China and Europe, and continues to be used today for the treatment of pain (particularly low back pain and osteoarthritis), headache, and inflammatory conditions, such as bursitis and tendinitis. The bark of white willow contains salicin, which is a chemical similar to aspirin (acetylsalicylic acid). In combination with the herb's powerful anti-inflammatory plant compounds (called flavonoids), salicin is thought to be responsible for the pain-relieving and anti-inflammatory effects of the herb. In fact, in	See point 2(7).

General				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application
		basic substance we think that more information on impact at intended GAP on non-target organisms would be necessary. A basic risk assessment should consider the expected exposure conditions for the relevant groups of non-target organisms and compare them to the exposure condition in the provided effect studies. From the information given it is hardly possible to come to a final conclusion on the ecological risks.	the 1800s, salicin was used to develop aspirin. White willow appears to bring pain relief more slowly than aspirin, but its effects may last longer. Source: Willow bark | University of Maryland Medical Center http://umm.edu/health/medical/altmed/herb/willow-bark#ixzz2sdbi8xWc University of Maryland Medical Center Again, Neem extract – azadirachtin, product which we support and work on market authorization in France, is supported in fact by a Company AND a specialized market, *Salix alba* water extract potential is extremely low since *salix alba* bark is available on herbal market.	
1(2)		ES: No comments		Noted.

2. Identity of the substance/product as available on the market and predominant use

2.1. Predominant Use				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application
2(1)		ES: No comments		Noted.

2.2. Identity and Physical and chemical properties of the substance and product to be used				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application
2(2)	2.2.1, identity of the basic substance	EFSA: It is unclear what the specification of the basic substance is. In the application it is unclear: in some places it is whole plant material or bark or powdered bark, wet or dry. The methods are not well described and are not validated.	Corrected	It is still unclear what the specification of the basic substance is. In the application it is unclear: in some places it is whole plant material or bark or powdered bark, wet or dry. The methods are not well described and are not validated.
2(3)	2.2.2 Chemical name	DE: Please correct the IUPAC-name for D-(-)-Salicin.	Corrected	Addressed.
2(4)	2.2.1 Common name of the substance and product and their synonyms/plant nomenclature	ES: The synonym in Spanish should be included.	Corrected, included	Addressed.

2.3. Current Former and in case proposed trade names				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application

No comments.

2.4. Manufacturer of the substance/products				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application
2(5)		ES: No comments		Noted.

2.5. Type of preparation				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application
2(6)		ES: No comments		Noted.

2.6. Description of the recipe for the product to be used				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application
2(7)	2.6, recipe	EFSA: The Regulation states the following. 'It is not predominantly used for plant protection purposes but nevertheless is useful in plant protection either directly or in a product consisting of the substance and a simple diluent.' This is not the case for this material as it is extracted at 80 degrees for 2 hours and then the pH is adjusted. This means that it is being formulated and is not a basic substance. It is rather a plant extract and separate guidance is being prepared for these substances.	SANCO/11470/2012– rev. 5 Document of 08 May 2013 stipulate chapter 16. "Regulation (EC) No 1107/2009 introduces the new category of "basic substances" which are described as "*active substances, not predominantly used as plant protection products but which may be of value for plant protection and for which the economic interest of applying for approval may be limited*". This can also apply to botanical active substances. Recipe for BSA salix alba is similar to pharmaceutical infusion use of willow bark for thousands of years (as well as chewing) giving rise to aspirin, far more lately.	The Regulation states the following: '*It is not predominantly used for plant protection purposes but nevertheless is useful in plant protection either directly or in a product consisting of the substance and a simple diluent.*' This is not the case for this material as it is extracted at 80 ^{o}C for 2 hours and then the pH is adjusted. This means that it is being formulated and is not a basic substance. It is rather a plant extract and separate guidance is being prepared for these substances. See also 1(1) and 10(1).
2(8)		ES: No comments		Noted.

2.7. Function on plant protection				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application
2(9)		ES: No comments		Noted.

3. Uses of the substance and its product

3.1. Field of use				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application
3(1)	3.1	ES: It says "…is intended to be used in fields for plant protection on grapevines and apple trees" but in the table of intended uses, "peach tree" is also included. It should be corrected.	Corrected: "Orchards"	Addressed.

3.2. Effects on harmful organisms or on plants				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application
3(2)		DE: The listing of intended uses in the text, the presentation of results are not consistent with the GAP.	Corrected: "Orchards" Apple trees use added	Addressed.
3(3)		DE: we acknowledge the attempt to demonstrate data on product efficacy. But the graphics shown should be in a shape to be understood, i.e. English language, correct description and so on. Furthermore we recommend to check the English language in order to avoid misunderstandings (e.g. what are "head hakes"?	Corrected as much as possible, non-informative part of graphics removed, translation of description done. For translation, some foreign languages were subject to translation (Japanese, Arabic, Russian) during our works on BSA(s), but as matter of fact, English, German, and French are legal languages in EU (On legal basis). All these studies were founded by French grants and therefore have legally to be written in French. See further : « Études sur la traduction et le multilinguisme ; La traduction à la Commission: 1958-2010 **Commission européenne Direction Générale de la**	Efficacy data were not reported in an understandable way. Much information is missing (application rates, number and timing of applications etc.) to conclude that the use of *Salix alba* bark according to the proposed GAPs results in a sufficient efficacy against the target diseases.

3.2. Effects on harmful organisms or on plants				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application
			Traduction 2/2009 » If translation is mandatory, we will ask Commission for funding. As matter of facts Agenda of SCoFCAH are published in these 3 languages Corrected	

3.3. Summary of intended uses				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application
3(4)		DE: The substance is claimed to be used as a fungicide/plant protection product in organic farming. Thus it has to be questioned, whether the criteria laid out in §23 are met.	"Regulation (EC) No 1107/2009 introduces the new category of "basic substances" which are described as "*active substances, not predominantly used as plant protection products but which may be of value for plant protection and for which the economic interest of applying for approval may be limited*". This can also apply to botanical active substances. Recipe for BSA salix alba is similar to pharmaceutical infusion use of willow bark for thousands of years (as well as chewing) giving rise to synthetic aspirin, far more lately.	Addressed: It is clear that its main use is not as a plant protection product so as far as that part of the article is concerned it is eligible. But it is not eligible for other reasons.
3(5)		DE: Please specify to which substance the "Concenctration of a.i. in g/kg" actually refers (content of salicylic derivatives, expressed as salicin? or dried plant?). A clear specification	Corrected All transformed in g/L of total eq salicin	Addressed: The situation has been clarified.

3.3. Summary of intended uses				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application
		with respect to content of salicylic derivates would be preferable since some of the effect studies also refer to doses of salicylic derivates.		
3(6)	Crop and / or Situation	DE: Fruit trees Apple fruit (*Malus pumila*)': or *M. 'domestica'*	Corrected	Addressed.
3(7)	Application / Growth stage & season	DE: - The growth stages given should be checked for their applicability in the different crops, and whether they match to the seasons indicated. - Abbreviations are explained at the end of the table, e. g. ' (j) Growth stage at last treatment...'. However, in the table timeframes for applications are given, e. g. from first shoots to cluster tightening, 2 to 6 applications in total, as it would be a typical scheme for the use of an elicitor. Therefore, it is suggested to correct the explanation for (j).	Corrected BBCH stages included	Addressed: BBCH stages have been included.
3(8)	Application rate / water l/ha min max	DE: - In three-dimensional crops, the application rates of water seem to be too low (1000 or even up to 1500 L/ha would be common according to height of culture an application technique).	Taken in account, no change	Addressed.
3(9)	3.3 Summary of intended uses	ES: In the "Remarks" of the tables, it is said "… to be used 24 h after preparation" and it should say "…to be used up to a maximum of 24 hours after preparation".	Corrected	Addressed.

4. Classification and labelling of the substance

Classification and labelling of the substance				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application

No comments.

5. Impact on Human and Animal Health

5.1. Effects having relevance to human and animal health arising from exposure to the substance/its products or to impurities				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application
5(1)	General comment	EFSA: Several substances are mentioned to be constituents of *Salix alba* bark. Many of these have pharmacological properties, for which the clear characterisation of the toxicological properties is not given with sufficient details, either alone or in the representative combination, to perform an adequate hazard and risk assessment.	See EFSA Journal 2010; 8(2):1493 **Conditions of use** - Equivalent to 120-240 mg salicin or 3-9 g dried bark	Several substances are mentioned to be constituents of *Salix alba* bark. Many of these have pharmacological properties, for which the clear characterisation in terms of identity and the toxicological properties is not given with sufficient details, either alone or in the representative combination, to perform an adequate hazard and risk assessment. The EFSA opinion mentioned in the application and in the col. 3 does not address the points raised above.

5.2. Toxicokinetics and metabolism in humans				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application

No comments.

5.3. Acute toxicity				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application
5(2)	5.3, p. 16	DE: Salicin is considered as having sensitizing properties (Skin Sens 1, H317) according to ECHA C&L inventory. Salicin is a major component of the extract, clearly exceeding the 0.1% concentration limit for sensitizers within the extract. Thus, § 23 (a) is not met and the substance cannot be approved for being used as a basic substance.	Regarding ECHA Statement, acetylsalicylic acid (ASA) is: H302: Harmful if swallowed and Xn; R22 Harmful if swallowed; and still sold by tons to humans by some company (German included).	Salicin is a skin sensitiser (Skin Sens 1, H317) according to ECHA C&L inventory. As Salicin is a major component of the extract (well above the 0.1% concentration limit for sensitizers) the extract does not comply with Article 23(1)a to be approved for being used as a basic substance.

5.4. Short–term toxicity				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application

No comments.

5.5. Genotoxicity				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application

No comments.

5.6. Long-term toxicity				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application

No comments.

5.7. Reproductive toxicity				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application
5(3)	5.7, p. 17	DE: For Salix alba extract the cited EMEA report on toxicity claims that 'teratogenicity of salicylates in animal models are described'. Since salicylates are described to be a major component (approx 12.5 % according to summary report page 7) of the active substance it seems likely that sensitising or teratogenic properties of these components would also be found for the extract as well. Hence Salix alba extracts cannot be considered as substance of no concern based on the data presented. Thus, § 23 (a) is not met and the substance cannot be approved for being used as a basic substance.	Corrected See EFSA Journal 2010; 8(2):1493 **Conditions of use** - Equivalent to 120-240 mg salicin or 3-9 g dried bark	Several substances are mentioned to be constituents of *Salix alba* bark. Many of these have pharmacological properties (e.g. teratogenic potential of salicylates or skin sensitisation). Therefore Salix alba bark does not comply with Article 23(1)a to be approved for use as a basic substance.

5.8. Neurotoxicity				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application

No comments.

5.9. Toxicity studies on metabolites				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application

No comments.

5.10. Medical Data adverse effects reported in humans				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application

No comments.

5.11. Additional Information related to therapeutic properties or health claims				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application

No comments.

5.12. Additional information related to use as food				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application

No comments.

5.13. Acceptable daily intake, acute reference dose, acceptable operator exposure level				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application

No comments.

5.14. Impact on human and animal health arising from exposure to the substance or impurities contained in it				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application
5(4)	5.14 (exposure assessment)	DE: A risk assessment based on exposure calculation was not done. However, as long as no toxicological threshold values exist for compounds in *Salix alba* this is not considered necessary.	No comments Unlike aspirin, salicin did not inhibit PHA-induced lymphocyte Highfield E. S. and Kemper K. J. 1999 White Willow Bark (*Salix alba*) Longwood Herbal Task Force: http://www.mcp.edu/herbal/default.htm Revised July 13, 1999, pp1-12	A risk assessment for operator, worker and bystander cannot be performed because no exposure assessment is available as well as no toxicological reference values.

6. Residues

Residues				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application
6(1)		ES: No comments		Addressed

7. Fate and Behaviour in the environment

Fate and Behaviour in the environment				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application
7(1)	Section 8	EFSA: The information available in the environmental fate and behaviour section is about the effect of salicylic acid (a potential metabolite of salicin) in Atlantic Canadian sewage treatment plant effluents and receiving waters on aquatic organisms. This piece of information does not contain any assessment of the potential environmental exposure of salicin following application as a fungicide in EU agricultural crops. The potential maximum application rate of *Salix alba*, according to the reported intended uses, will be up to 6 kg /ha. This rate is deemed to result in environmental exposures above natural levels and above levels resulting from other authorised uses. Relevant active components, other than salicin, shall be considered in the environmental exposure assessment as well.	**Ecological/Environmental Uses** – Willows have many beneficial environmental uses. They can be used in the following areas: Riparian buffers – Natural barriers that prevent chemicals from entering streams, ponds, and lakes. Phytoremediation – Willows clean up toxins from contaminated sites. Wastewater management (biofiltration) – Willows filter contaminants from wastewater, and can be used in ecological wastewater treatment systems. Environmental protection and preservation – Willows are often used for land reclamation, streambank stabilisation (bioengineering), slope stabilisation, soil erosion control, shelterbelt and windbreak construction, soil building, and soil reclamation. Environmental reconstruction – Willows are used for constructing wetlands and wildlife habitat. Gardening – Willows are used for in the construction of hedges, "living fences" and other living garden structures and general landscaping Living snowfences – Strategically planted willows trap drifting snow. Farming – Willows can used by farmers as	The available information is not sufficient to address the environmental exposure assessment of *Salix alba* following application as a fungicide for the representative uses applied for.

Fate and Behaviour in the environment				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application
			an animal forage to feed their stock.	
7(2)	Section 8	EFSA: An EU evaluation relevant for the natural environment is not referred to and therefore is probably not available. Therefore derogation from Article 4 of the Regulation is not possible and risk assessments for non-target organisms are necessary.		Information was not provided that would enable an environmental exposure assessment to be carried out. Such an assessment would be needed to conduct the risk assessments for non-target organisms.
7(3)		ES: No comments		Noted

8. Effects on non-target species

8.1. Effects on terrestrial vertebrates				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application
8(1)	Section 8, Effects on non-target organisms	EFSA: An EU evaluation relevant for ecotoxicology is not referred to and therefore is probably not available. Therefore derogation from Article 4 of the Regulation is not possible and risk assessments for non-target organisms are necessary.		An EU evaluation relevant for ecotoxicology is not referred, therefore derogation from Article 4 of the Regulation is not possible and risk assessments for non-target organisms are necessary.
8(2)	Section 8.1, Risk assessment for terrestrial vertebrates	EFSA: The available acute data do not indicate high toxicity to mammals. However, it would be more transparent to use this data in a risk assessment and demonstrate a low acute risk to mammals for the proposed uses. A consideration should also be given to the long-term risk to wild mammals.	**Ecological/Environmental Uses** – Willows have many beneficial environmental uses. They can be used in the following areas: Riparian buffers – Natural barriers that prevent chemicals from entering streams, ponds, and lakes. Phytoremediation – Willows clean up toxins from contaminated sites. Wastewater management (biofiltration) – Willows filter contaminants from wastewater, and can be used in ecological wastewater treatment systems. Environmental protection and preservation – Willows are often used for land reclamation, streambank stabilisation (bioengineering), slope stabilisation, soil erosion control, shelterbelt and windbreak construction, soil building, and soil reclamation. Environmental reconstruction – Willows are used for constructing wetlands and wildlife habitat.	The uses of willows in ecological and environmental management are not considered to address the risk to terrestrial vertebrates from the representative use of *Salix alba* extract as a foliar spray. The use as a foliar spray may lead to contamination of the food items of birds and mammals which may subsequently be consumed. Therefore, a risk assessment taking account the toxicity and likely level of exposure is needed.
8(3)	Section 8.1, Risk assessment for terrestrial vertebrates	EFSA: No risk assessment or argumentation has been provided to address the risk to birds. The proposed use can lead to exposure to birds and therefore an assessment is necessary.		

8.1. Effects on terrestrial vertebrates				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application
			Gardening – Willows are used for in the construction of hedges, "living fences" and other living garden structures and general landscaping Living snowfences – Strategically planted willows trap drifting snow. Farming – Willows can used by farmers as an animal forage to feed their stock.	

8.2. Effects on aquatic organisms				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application
8(4)	Section 8.2, Effects on aquatic organisms	EFSA: Regarding the toxicity to aquatic organisms the literature paper by Sanderson et al. (2009) has been referred to. However, this is just a summary of other research and therefore the underlying primary data should be made available.	Salicylic acid was detected in high concentration ranging from 4.1 to 8.8 µg (microgram) / L in Germany and Spain. Although this is not proof of safety, this should minorate expectation on BS application. Park, J., 2005. Pharmaceuticals in the environment and management approaches in Korea. KEI, 2005, RE-12. http://www.kei.re.kr/04_publ/pdf/report/05RE12.pdf Ayscough, N.J., Fawell, J., Franklin, G., Young, W., 2000. Review of human pharmaceutical in the environment. R&D Technical report p. 390. <http://publications.environment-agency.gov.uk/pdf/STRP390-e-p.pdf>	The applicant has provided a literature paper by Sanderson et al. (2009); however, this is a summary paper of other research. The two additional reports (internet links) provided by the applicant are also summary papers. The underlying data has not been provided (i.e. reference should be made to primary research where the experimental toxicity values are determined). The detection of salicylic acid in Germany and Spain is not considered to address the risk to aquatic organisms.

8.2. Effects on aquatic organisms				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application
8(5)	Section 8.2, Effects on aquatic organisms	EFSA: The paper by Caminada et al (2006) provides some information on the cytotoxicity of salicylic acid with the view of extrapolating to the acute toxicity to aquatic organisms. It is not clear how the applicant wishes to use this information for risk assessment.	*Salicylic acid* is one of the main metabolites released by salicin. Papers cited give information on level of toxicity to fish. More references are given in BSA	The cited paper gives information regarding the cytotoxicity to fish cells and not *in vivo* testing.
8(6)	Section 8.2, Effects on aquatic organisms	EFSA: Unless it is demonstrated that there will not be long-term exposure to aquatic organisms following the proposed uses, then information is required to address the chronic risk to aquatic organisms.	*Salix alba* infusion is not supposed to last long in field, decomposed by light rapidly.	Information was not provided that would enable an environmental exposure assessment to be carried out (see comment 7(1)). Therefore, the chronic risk to aquatic organisms needs to be addressed.
8(7)	Section 8.2, Effects on aquatic organisms	EFSA: A risk assessment, taking account of the predicted exposure for the proposed uses, should be provided in order to demonstrate a low acute and chronic risk to aquatic organisms.	*Salicylic acid* is one of the main metabolites released by salicin. Papers cited give information on level of toxicity to fish. More references are given in BSA	Insufficient information is available to perform a risk assessment for aquatic organisms from the representative use of *Salix alba* bark. A risk assessment, taking account of the likely exposure and the toxicity to fish, aquatic invertebrates and algae is required.

8.3. Effects on bees and other arthropods species				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application
8(8)	Section 8.3, Effects on bees, CASDAR, 2009	EFSA: A number of concerns were noted with this study: i) The study was not performed to GLP. ii) It was not performed to a recognised test guideline (e.g. OECD 213, 214).	Full environmental evaluation for bees? Like fully evaluated pesticides, mentioned in : EFSA Journal 2013;11(1):3068 [55 pp.], with "Several data gaps" and sold for 20 years, and lately cited in	Derogation from Article 4 of the Regulation is not possible and risk assessments for bees are necessary. The study provided by the applicant is not

8.3. Effects on bees and other arthropods species				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application
		iii) It is not clear what the doses were tested. iv) No toxic standard was included to demonstrate the sensitivity of the test design.	http://www.efsa.europa.eu/fr/press/news/131217.htm	considered to be of sufficient quality for risk assessment. Consequently, a risk assessment for contact exposure to honey bees cannot be performed.
8(9)	Section 8.3, Effects on bees	EFSA: The available data only addresses the contact toxicity to honey bees. No information was provided to address the acute oral toxicity.	OECD 230 Method added in BSA and bibliography, unfortunately this document is on alcoholic extracts: Guillet B 2012 EVALUATION DE L'INNOCUITE DE SUBSTANCES D'ORIGINE VEGETALE SUR *APIS MELLIFERA*, CASDAR Evaluation des caractéristiques et de l'intérêt agronomique de préparations simples de plantes, pour des productions fruitières, légumières et viticoles économes en intrants. AAP CAS DAR 2009, n° 9046	The information available is not sufficient to perform an oral risk assessment for honey bees. An additional study has been provided by the applicant (Guillet B., 2012), however, the study is presented in French and an English translation is not available. Furthermore, the study does not appear to have been performed to GLP and it is not clear how the tested substance related to *Salix alba*.
8(10)	Section 8.3, Effects on non-target arthropods	EFSA: No assessment has been provided to address the risk to non-target arthropods other than honey bees.		No information has been provided to address the risk to non-target arthropods.
8(11)	Effects on bees	DE: The recommended use pattern for boiled *Salix alba* bark includes application in grapevine, apple fruit and peach-tree. Bees may be exposed to the solution by direct spraying while they are foraging on flowers and weeds, through contact with fresh or dried residues or by oral uptake of contaminated pollen, nectar and honey dew. In a study by Silici & Kutluca (2005) propolis samples from different bee	Among the various plant extracts tested, only willow bark (LAB 22) presents no toxicity to bees doses (D) used in the field either by contact or ingestion. Given as example, no analysis of *salix alba* bud is available.	Please refer to 8(8) and 8(9). It is agreed that exposure to honey bees cannot be excluded and therefore a risk assessment is required.

8.3. Effects on bees and other arthropods species				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application
		colonies were investigated by using GC/MS. Propolis is a resinous substance collected by *Apis mellifera* from various tree buds. Bees use propolis for coating hive parts and also to seal cracks and crevices in the hive. Propolis composition is directly related to that of bud exudates collected by bees. It has been shown that *Salix alba* has been a main sources for propolis. But it is not clear if the bark includes the same ingredients as the buds. An assessment based on the submitted study of Casdar AAP CAS DAR 2009, n° 9046 is not possible because the study is only released as a summary and available only in French. Due to the lack of information a risk to bees cannot be excluded.		

8.4. Effects on earthworms and other soil macroorganisms				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application
8(12)	Section 8.4, Effects on earthworms, Kocik et al (2007)	EFSA: A number of issues were noted: i) The study was performed with *Salix viminalis;* it is not clear how this relates to *Salix alba* in relation to the amount of salicylic acid.	Comment: Nothing more than what it is written: Willow and earthworms are compatible in the sludge. *Salix viminalis* is not different from *Salix alba* regarding main important	Further information is needed to perform a risk assessment for earthworms from the representative use of *Salix alba*. A literature paper is available where earthworms were introduced to pots of

8.4. Effects on earthworms and other soil macroorganisms				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application
		ii) The earthworms were placed on pots where *Salix viminalis* were grown. It is not clear whether the exposure of the earthworms would be comparable to the proposed use of *Salix alba* as a foliar spray.	compounds described in the BSA.	sewage sludge where willows were grown (*Salix alba*). The exposure in the study cannot be considered as comparable to that expected following the representative use of *Salix alba* as a plant protection product (foliar spray). Consequently, the available study is not considered to be suitable for risk assessment.

8.5. Effects on soil microorganisms				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application
8(13)	Section 8.5, Effects on soil micro-organisms	EFSA: The paper of Abhilash is unpublished (article in press). Moreover, the paper is not primary research and is an opinion based on other research. Therefore, the relevant underlying data referred to in the paper of Abhilash should be provided. An assessment of the level and type of exposure in relation to that predicted for the proposed uses should be provided.	Paper is published, included in BSA bibliography: Trends Biotechnol. 201; 30(8):416-20. Abhilash PC, Powell JR, Singh HB, Singh BK. References therein on remediation (in green furnished): 39 Volk, T.A. et al. (2006) The development of short-rotation willow in the northeastern United States for bioenergy and bioproducts, agroforestry and phytoremediation. Biomass Bioener. 30, 715–727 Similar information in 38 Pulford, I.D. and Watson, C. (2003) Phytoremediation of heavy metal-contaminated land by Trees – a review. Environ. Int. 29, 529–540	Further information is needed to address the risk to soil microorganisms from the representative use of *Salix alba* bark. The referenced papers do not address the risk to soil microorganisms (specifically soil respiration and nitrification processes) from exposure to extracts of *Salix alba* applied as a spray product.

8.5. Effects on soil microorganisms				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application
			40 Ruttens, A. et al. (2011) Short rotation coppice culture of willows and poplars as energy crops on metal contaminated agricultural soils. *Int. J. Phytorem*. 13, 194–207	

8.6. Effects on other non-target organisms (flora and fauna)				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application
8(14)	Section 8.6, Effects on non-target terrestrial plants	EFSA: It is not clear how the literature paper by Causin (2012) addresses the risk to non-target terrestrial plants. In any case, a consideration of the predicted exposure for the proposed uses in relation to that discussed in Causin (2012) should be provided.	Removed Replaced	No information is available to assess the risk to non-target terrestrial plants. Given that the representative use of *Salix alba* is as a foliar spray, exposure to non-target terrestrial plants cannot be excluded and a risk assessment is required.

8.7. Effects on biological methods of sewage treatment				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application

No comments.

9. Overall conclusions with respect of eligibility of the substance to be approved as basic substance

Overall conclusions with respect of eligibility of the substance to be approved as basic substance				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application
9(1)		ES: No comments		Noted.

10. Other comments

Other comments				
No.	Column 1 Reference to Application Template	Column 2 Comments from Member States / EFSA	Column 3 Follow up response from applicant	Column 4 EFSA's scientific views on the specific points raised in the commenting phase conducted on the application
10(1)		ES: In the name of the basic substance, it should be specified that it is an infusion or extract (Title page of the application).	As matter of fact, it was not mentioned/considered in Equisetum BSA (decoction). Characteristics of products are described in section 2.2.5 and recipe in section 2.6 Water infusion can be added to both as Salix alba bark, Water infusion White willow bark, Water infusion Up to DGSanco / EFSA	See point 2(7).

ABBREVIATIONS

DG SANCO	European Commission Directorate General Health and Consumers
EFSA	European Food Safety Authority
EU	European Union
ITAB	Institut Technique de l'Agriculture Biologique