

## **Submission**

### **Application A1039, Low THC Hemp as a Food**

#### **Introduction:**

Midlands Seed Limited is a specialty seed company located in Ashburton, on the Canterbury Plains in the South Island of New Zealand. Products produced by Midlands include Vegetable seeds, Pulses, Oilseeds (including hemp seeds), Forage seeds and Cereal Grains. Within this product range is a section of the business that focuses entirely on the production and marketing of Arable Foods such as Split Peas, Pea Flour, Pearled Barley, and Whole Grains such as Flaxseed and Buckwheat. In addition to New Zealand seed production, Midlands also have a Tasmanian office and local staff to support additional seed production in Tasmania. Midlands Seed Limited was established in 1990, and has been producing hemp seed in New Zealand since the first licenses were issued in 2001 by Medsafe. In addition Midlands Tasmania has also held a license for Tasmanian hemp production since 2008. For more details please visit [www.midlands-seed.co.nz](http://www.midlands-seed.co.nz), and [www.midlands.co.nz](http://www.midlands.co.nz).

Oil Seed Extractions Limited (OSE), is a subsidiary company of Midlands, and has been producing and marketing hemp seed oil and hemp seed meal for local and export markets, since the companies incorporation in 2002. Our New Zealand hemp seed oil was initially marketed under the brand 'Sustainable Seed Oils, and more recently 'new hemisphere'. For more details please visit [www.seedoils.co.nz](http://www.seedoils.co.nz).

new hemisphere is OSEs brand for hemp seed products, with the current focus being hemp seed oil for the local New Zealand market as well as export to Asia and Europe. To find out more about new hemisphere please visit [www.nzhempoil.co.nz](http://www.nzhempoil.co.nz).

**For full details on the chronological history of our involvement with industrial hemp and hemp seed oil please see Appendix 1.**

This submission represents the interest of both companies Midlands and OSE and our hemp seed product brand new hemisphere. Midlands and OSE are both committed to the development of the Industrial Hemp industry in New Zealand and Australia, and view a change in the food laws to allow the sale of Low THC Hemp Foods as the catalyst for the progression of the current 'cottage industry' into a viable and profitable business sector further linking agricultural production to the food ingredients and dietary supplement sector. Two key objectives for our businesses are to identify and create new opportunities for Arable farmers in New Zealand and Australia, and to produce and supply high quality Low THC Hemp Foods to New Zealand and Australian consumers. This submission represents the view of our Board of Directors and key staff.

## **Executive Summary**

Midlands Seed Ltd and OSE strongly support the proposed amendment to Standard 1.4.4 that will allow the sale of Low THC Hemp Foods in New Zealand and Australia. In answering the key questions identified in the Application A1039 Consultation Paper, the following key themes and discussion points have been identified;

-Regulatory controls are very important to ensure parties with non-legitimate interests do not compromise the integrity of Low THC Hemp Foods in the Australian and New Zealand market.

-In addition to grower producers, Low THC Hemp Food manufacturers should be licensed, so that the industry can be centralized and regulated

-Barriers to the import (i.e. compliance costs, tariffs etc) of finished product Low THC Hemp Foods are also important to support Australian and New Zealand hemp seed producers and manufacturers

## **Response to Consultation Paper Questions 1-18:**

1. Are you aware of any evidence that consumers believe that low THC hemp foods have psychoactive effects?

Midlands has been producing hemp seeds in New Zealand since the first licenses were issued by Medsafe in 2001. The resultant Hemp seeds produced have been crushed to produce hemp seed oil by our subsidiary company OSE, and this oil has been marketed initially under the brand name Sustainable Seed Oils (2002-2005), and more recently New Hemisphere Ltd (from 2005 until present day). In the early stages of our involvement with Hemp Seed Oil, customer enquiries questioning the psychoactive properties of hemp seed oil were not uncommon. However in more recent times the general public appears to be far more informed of the clear difference between Low THC Hemp Foods and its cousin marijuana. For our business, actively involved with and leading the New Zealand Hemp Industry, our current interaction with consumers that believe low THC hemp foods have psychoactive effects would best be described as very rare to non-existent. It is our belief that the change of food laws allowing the sale of Low THC Hemp Foods requires stringent regulatory controls relating to labeling requirements, production requirements, and import requirements to ensure a high standard of Low THC Hemp Food products will exist in the Australasian market. In addition, it is very important that companies promoting and selling hemp foods support the growth of this industry with investment and reinvestment in education of consumers on the low THC levels of hemp and its clear separation from the psychoactive properties of marijuana. By changing the existing food laws, and allowing the sale of low THC hemp foods, the industry will have a means of generating business profits, which will allow the required investment to be made in the education of consumers re low THC hemp foods.

2. Are you aware of any evidence that representations on low THC hemp foods (including labeling and advertising) mislead consumers by leading them to believe that Low THC Hemp Foods have psychoactive effects when consumed?

Hemp foods are being consumed around the world in many countries, including Canada, the United States, United Kingdom and the European Community. The unique and exceptional nutritional profile present in hemp seeds is a clear selling point and has attracted the attention of people with special dietary requirements, such as vegans and vegetarians, and in general health conscious consumers. Those seeking out hemp foods include the elderly, pregnant mothers and their young children. It is reasonable to conclude that the consumers of hemp foods are generally more knowledgeable and better informed than the average consumer on matters of health and nutrition and would not be easily misled by any such 'psychoactive' claims. In addition, hemp is no different to any other food product advertised in Australia and New Zealand, and the general public would be protected in that any such misrepresentations would be controlled and penalized under existing Trade Practices legislations. This statement is made given our own experiences with existing labels for our hemp seed oil 250ml, and our hemp seed oil soft gel capsules, both of which are sold under the new hemisphere brand.

**Included as Appendix II is a list of references relating to the health benefits of hemp seed oil and hemp seeds.**

3. Can you provide any evidence in addition to that presented in this consultation paper whether or not the consumption of low THC hemp foods can return a positive result for a THC drug test?

The analysis presented in the Application A1039 Consultation paper covers the topic well and reasonably establishes that at usual levels of consumption the issue of false positive testing does not occur. Although formal studies appear to be lacking, around the world many elite athletes consume hemp health foods, particularly hemp protein, and often in generous quantities. These products have been and continue to be actively marketed to this specialist supplement market, which would suggest that Low THC Hemp Foods will not return a positive result for a THC drug test.

4. Can you provide information on THC drug testing procedures in Australia and NZ, particularly with regard to regulatory limits of THC that may be set?

The current New Zealand standard for the maximum limit of THC in accordance with the New Zealand hemp regulations is set at <0.35. **THC testing is conducted by ESR, and previous results for New Zealand hemp plants, hemp seed oil and hemp meal completed by Midlands and OSE are attached as Appendix III.** These results clearly demonstrate the minimal levels of THC that can be expected in high quality Low THC Hemp Foods, where the hemp seeds used are cleaned thoroughly by a commercial seed cleaner after harvest.

5. Can you provide information to indicate whether there will be an impact on the cost of testing for THC in humans that could arise from an approval of hemp foods?

The predominant market for Low THC Hemp Foods will be the functional food or dietary supplement market, where the testing of active ingredients and other negative and positive attributes of finished products and ingredients for finished products is an everyday part of doing business. In addition, ideally robust controls around production, manufacturing and importing will mean only low THC hemp foods exist in the market, thereby avoiding any impact on the

testing of THC in humans. As mentioned prior, hemp foods are already legal in other developed countries around the world, and this item does not appear as an issue in these countries.

6. Do you agree that there are adequate controls currently in place, or that would be achieved by imposing maximum limits for THC, to mitigate any risk of high THC Cannabis varieties entering the food supply?

As mentioned Midlands and OSE has both been involved with the Industrial Hemp Regulations and Licensing in New Zealand since the first licenses were issued in 2001, and during this time has developed an intricate knowledge of the constraints and challenges of hemp seed production, and the marketing of hemp seed products. Clearly, it is important that in the future licensing costs in New Zealand and all of the Australian states are consistent in their requirements and costs so that no area of production within these territories is advantaged or disadvantaged. Our businesses are in favor of strong regulation of hemp production and marketing in New Zealand and Australia in order that consumers will maintain their confidence in Low THC Hemp Products. At the same time we also believe, that the type of regulation should not be overly complex and excessively costly. A suitable cost should not encroach on the economic feasibility of the hemp production process, but should be significant enough to deter anyone with non-legitimate interests in the production of this crop and the marketing of related finished products. The production process established by Midlands Seed Ltd and OSE in New Zealand, from the growing of the seed through to the production of an end product, stands as an excellent model for the long term success of commercial hemp production and marketing in Australasia. If similar models can be consistently established in New Zealand and Australia, there is no risk of high THC varieties entering the food supply.

Aside from local production however, imported finished products pose a significant risk of high THC hemp products entering the food supply if adequate controls are not in place. Therefore we believe that it is very important that mandatory testing of Low THC Hemp Product imports in a finished or final packaging format (produced and packaged outside of Australia and New Zealand) be established. Because FSANZ covers New Zealand and Australia, it is only reasonable that New Zealand Low THC Hemp Foods be permitted entry to Australia without any additional constraint and vice versa.

7. Do you consider that trade practices legislation in Australia and New Zealand is sufficient to mitigate the potential risk that representations (including labeling and advertising) of hemp foods could suggest psychoactive properties relating to consumption of those foods? If not, what other conditions regarding labeling and representations of hemp foods should be considered?

Yes, we believe that current trade practices legislation in Australia and New Zealand is sufficient to mitigate this potential risk.

8. What is the potential opportunity cost for current producers of hemp crops if hemp foods continue to be prohibited?

If Low THC Hemp Foods were allowed to be sold in New Zealand and Australia, a minimum premium of \$1000 per hectare could be expected for grower producers of hemp seeds versus the



returns from the same crop under the current food laws. This premium could be high as \$2000 per hectare or more, and well above the returns for alternative commodity options such as wheat or barley. Taking the New Zealand agricultural sector as a case study, the area of hemp seed produced for foods could be anticipated as 50% of the local annual flaxseed production for this territory, which could be estimated as 2000 metric tonne (MT). Therefore 1000MT of hemp seeds, assuming 1MT per hectare as a yield per hectare estimate (consistent with our agricultural research), would require 1000 hectares of production. This makes a simple calculation of 1000 hectares per annum multiplied by \$1000 per hectare, totaling an opportunity cost for New Zealand grower producers of One million dollars per annum minimum, if the current food laws remain unchanged and hemp foods continue to be prohibited. The per hectare premiums for regions of Australia suited to hemp seed production in contrast to other commodities, would be much higher, as would the total areas of production across Australia.

The opportunity cost to food manufacturers and marketers could also be assumed as far greater, given the value added opportunities for shelled hemp seed and hemp proteins in local markets, as well as other export markets. This can be demonstrated from trade statistics of Canadian Hemp Food products exported to the United States which is a multi-million export industry created by the constraints imposed on United States grower producers in contrast to the more favorable regulatory environment of their neighboring Canadian grower producers.

In addition, the flow on effects of hemp foods could also extend to the establishment of a hemp fibre industry in Australia and/or New Zealand, which has occurred in other developed countries such as Canada.

9. What are the potential benefits to food manufacturers if hemp foods were approved for use?

If low THC Hemp Foods were approved for sale in Australia and New Zealand, this change would represent a significant opportunity for New Zealand and Australian Food manufacturers. As well as creating a new market, hemp foods would also replace existing imported food products and food ingredients into New Zealand and Australia. Comparative examples would be hemp seed oil versus imported fish oil, and hemp seed protein versus imported sources of protein such as whey and soy. This would create profits and employment opportunities for Australian and New Zealand businesses, and again adds further weight to the requirement for barriers to the entry of low THC hemp foods produced offshore. Keeping the production and food manufacturing local will mean all of the income created will be allocated to local businesses rather than offshore companies.

10. Are there likely to be any additional costs for food manufacturers wishing to supply hemp foods?

There has to be additional regulatory costs for food manufacturers of hemp seed products versus food manufacturers of comparative products such as flaxseed or canola, due to the nature of the product i.e. maximum THC limits. These regulatory costs are important to ensure the integrity of Low THC Hemp Foods in the market place is maintained. These costs should be kept consistent with other markets, by the relevant regulatory bodies.

11. Would the approval of low THC hemp foods increase the cost of food enforcement beyond what would be expected of the approval of any other substance added to food, or other food regulatory change?

It should be clear from the beginning that there will be an increase in the cost of food enforcement for Low THC Hemp Foods, which is a cost that the industry should be willing to bear to ensure these fantastic nutritional products can be delivered in an effective and controlled manner to New Zealand and Australian consumers. Organic Certification would be a comparative example. The regulatory cost of this industry is an additional cost that Organic producers are willing (and sometimes unwilling) to incur to ensure the integrity of their product can be maintained, and a high quality product can be delivered to the consumer. Whilst it is important that such costs are not prohibitive, it is important that all parties involved in the industry are aware of, and make a commitment to this requirement.

12. What other legislation would affect or be affected by approval of hemp foods?

The major additional legislative change would be customs regulations relating to Import requirements/standards. A MAF Biosecurity import standard specific to hemp seeds exists in New Zealand, and it is important that consistent import standards are also developed for hemp foods across New Zealand and Australian states. This must include as a minimum THC testing of each batch of finished product that enters Australia or relevant documentation from suppliers confirming the Low THC content of the goods in question. Midlands and OSE would also support import tariffs on finished product hemp foods produced outside of FSANZ territories to support the growth of the hemp production industry in Australia and New Zealand, ensuring the profits from the industry flow through to farmers and producers in these countries rather than offshore businesses in Europe and North America or even China.

13. Would the approval of hemp food have an impact on hemp regulations in Australia and New Zealand? For example, would industrial hemp destined for use in food require additional controls to those already specified in industrial hemp regulations?

Firstly, industrial hemp destined for use in food would not require additional controls at the grower producer level. All of these regulatory aspects could remain the same. This comment is based on Midlands experience with seed production for oil extraction, fibre production, and seed for sowing (i.e. stockseed for oilseed or fibre production), where all of the current hemp regulations have applied in the same manner.

Therefore the major change would appear to be the need to license and regulate food manufacturers handling Low THC Hemp Foods. Finished product testing should be implemented for Low THC Hemp Foods in addition to the current field tests for hemp licensing.

In addition, it would appear from Attachment 1 of the A1039 Consultation paper that there are significant inconsistencies in the hemp regulations across the states of Australia, and also New Zealand relating to THC content. With the significant growth of this industry that can be expected with the approval of Low THC Hemp Foods for sale, it would be desirable for

consistent regulations to be developed across New Zealand and the states of Australia, with a required THC content of <0.35%.

14. Would food manufacturers be required to be licensed under existing hemp regulations?

Yes (as mentioned above). We believe this to be very important in ensuring the integrity of low THC Foods in New Zealand and Australia.

15. Would additional costs be incurred by government agencies responsible for granting licenses for the cultivation of hemp as a result of approval of hemp foods?

The approval of Low THC hemp foods will lead to growth in the New Zealand and Australian Hemp Industry and a resultant increase in the number of grower producers and food manufacturers receiving licenses. However, no additional costs would be incurred because the system as it is currently operates is based on cost recovery i.e. user pays. As mentioned previously our businesses strongly support licensing fees to ensure the industry is centralized and well regulated so consumers can have confidence in Low THC Hemp foods in our local markets.

16. Can you identify risk management options that have not been considered in the impact analysis?

Risk management options have been well identified and discussed in the A1039 Consultation paper. Further discussion points identified in the content of this submission is the need to closely regulate imported finished products with product THC testing on arrival at the border. The current hemp regulations mean that local product will be THC tested in the field as a first control point, and this risk management will or may not be in place for imported products. In addition a suitable licensing fee structure in place for New Zealand and Australian producers is important to ensure the integrity of Low THC Hemp Foods for New Zealand and Australia is maintained.

17. Can you identify any other costs and benefits for any of the risk management options considered in this paper?

-Barriers to imported finished products will create additional benefits for Australian and New Zealand grower producers, with mandatory testing of these imported finished products also further ensuring high THC goods cannot enter the food supply.

-Hemp seed foods will create opportunities for Australian and New Zealand grower producers and food manufacturers as a result of local hemp food products substituting imported goods such as alternative vegetable oils and protein sources not currently produced locally.

-This local production will have flow on environmental benefits for Australian and New Zealand communities as hemp production is far less intensive than the production of other comparable agricultural commodities

-The health benefit of hemp seed products for the Australasian community is significant

18. Do you have a view about the appropriate preferred regulatory option regarding the approval of hemp foods, based on benefits and costs?

Key points would be as follows (relates to New Zealand and Australia);

- Hemp Seed and Fibre production to be based on existing hemp regulations (which are operating very well in New Zealand)

- Licensing for Food Manufacturers to be established

- No viable whole hemp seed permitted for sale, without licenses in place (as per hemp regulations above). Only whole hemp seed that has been sterilized i.e. non-viable, can be sold to consumers i.e. the general public

- Labeling and advertising requirements covered by existing Trade Practices Legislation

- Suitable fee structures to be established for license holders consistent with other successful markets i.e. Canada.

- Import barriers and stringent testing procedures to be established for finished product Low THC Hemp Foods to encourage local production. Current import standards already in place for whole hemp seed to remain unchanged.

- Hemp Industry Regulations to be put in place should be based on the successes of hemp food laws and regulations in other markets such as Canada and the United Kingdom.



# History of new hemisphere™ Hemp Seed Oil

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December 1994	National Government place Moratorium on the issuing of Licences to grow Industrial Hemp
September 1997	Release of Commercial Cultivation Of Cannabis Sativa For Production Of Industrial Hemp Legislative And Security Aspects Of Recent Australian Trials. Dr G R Boyd, Chief Advisor, Regulation and Safety, Ministry of Health, New Zealand
January 1998	NZHIA publish "The 5 Minute Guide to Industrial Hemp in New Zealand."
February 1998	The Government Interagency Working Party first meeting.
June 2000	The moratorium imposed on the issuing of licences to grow industrial hemp by the National government in 1994 was lifted on the 20 <sup>th</sup> June 2000.
August 2000	First "Inter-Agency Meeting on Cultivation of Industrial Hemp."with Government Subcommittee.
December 2000	In essence the Sub Committee's recommendations are: "that the emphasis should change to on whereby any organisation that can meet the licensing, security and other requirements, including funding the trials, should be allowed to make submissions and become licensed to trial industrial hemp.
April 2001	Minister of Health announces Ministry of Health accepting applications to be Licensed to grow Industrial Hemp.
Sept 2001	Midlands Seed Ltd is granted 1 of the 11 Licenses issued by Medsafe to grow Industrial Hemp Seed.
January 2002	Oil Seed Extractions Ltd releases Hemp Seed Oil under the brand 'Sustainable Seed Oils' to the New Zealand market
Feb/March 2002	First Industrial Hemp THC testing takes place
March/April 2002	Midlands Seed Ltd Completes first Hemp Seed Harvest
2001/2002	A360 Food Safety Assessment Report completed for the sale of hemp seed as a food. The recommendation from the Final Assessment Report is removal of the total prohibition on the use of <i>Cannabis</i> spp. In food and the establishment of maximum levels for THC in specified foods.

December 2002	Australian and New Zealand Food Regulation Ministerial Council (ANZFRMC) ignores A360 recommendation and maintain prohibition of hemp seed oil and foods in NZ and Australia. 20 December 2002, Food Standards code established, and exemption granted to hemp oil for sale in New Zealand.
2001-2005	Ongoing establishment of Regulatory framework for NZ Industrial hemp, and continual extensions of trial protocols
August 2005	'Sustainable Seed Oils' brand for Hemp Seed oil is changed to ' <b>new hemisphere™</b> '
October 2005	Australian and New Zealand Food Regulation Ministerial Council (ANZFRMC) again ignored the A360 recommendation and maintain prohibition of hemp seed foods in NZ and Australia. Vote was 4 for, 5 against with the major concern being that condoning hemp seed food would send mixed messages to children.
February 2006	Administration and management of the ' <b>new hemisphere™</b> ' Hemp Seed Oil brand shifts from Oil Seed Extractions to New Horizons/NZFC in Auckland
May 2006	' <b>new hemisphere™</b> ' exhibits Hemp Seed Oil at the Auckland Food Show
August 2006	Industrial hemp is now legal to grow under licence in New Zealand following the 1 August release of the Misuse of Drugs (Industrial Hemp) Regulations 2006 and the misuse of Drugs Amendment Regulations 2006.
August 2006	Finola,USO31 & Fasamo Cultivars approved by Ministry of Health, Medicines Control.
November 2006	General Industrial Hemp Licence granted to Midlands Seed Ltd Approved Cultivars - USO31
December 2006	Research & Breeding Industrial Hemp Licence granted to Midlands Seed Ltd Cultivars – Aotearoa1/ Benico/ Epsolon68/ Fedora17/ Feina32 / Ferimon/ Futura75 & Santhica27
February 2007	General Industrial Hemp Licence granted to Oil Seed Extractions Ltd Approved Cultivar – Fasamo
February 2007	Midlands Seed Ltd hosts Industrial Hemp Field Day which was sponsored by National Bank of NZ Ltd & Sustainable Hemp Co-Operative – Research Sponsors: Oil Seed Extractions Ltd, Midlands Seed Ltd, FAR, Biopolymer Network, new hemisphere™, ppcs Limited, Plant Research (NZ) Ltd, Winslow Feed Ltd.
December 2007	General & Research & Breeding Industrial Hemp Licence granted to Midlands Seed Ltd Approved Cultivars - Fasamo/USO31 Non Approved Cultivars - Epsilon68/ Felina32/ Futura75/ Fedora17/ Ferimon12 & Santhica27

September 2008	General Industrial Hemp Licence granted to Oil Seed Extractions Ltd Approved Cultivar – Fasamo
September 2008	Administration and management of the ' <b>new hemisphere™</b> ' Hemp Seed Oil brand returns to OSE
February 2009	General Industrial Hemp Licence granted to Oil Seed Extractions Ltd Approved Cultivar – Fasamo/Finola
February 2009	Markitable launches the ' <b>new hemisphere™</b> ' website <a href="http://www.nzhempoil.co.nz">www.nzhempoil.co.nz</a>
August 2009	Research & Breeding Industrial Hemp Licence granted to Midlands Seed Ltd Approved Cultivars - Fasamo/USO31 Non Approved Cultivars - Epsilon68/ Felina32/ Futura75/ Fedora17/ Ferimon12 & Santhica27
August 2009	Midlands Seed Ltd apply to Ministry of Health for Approval of Cultivar of Industrial Hemp Ferimon12
October 2010	Ministry of Health Medicines Control Approve Cultivar of Industrial Hemp Ferimon12
October 2010	New Zealand Gazette No.152, page 3672 Approved Cultivar of Industrial Hemp Ferimon12
January 2010	Midlands Seed Ltd apply to Ministry of Health for Approval of Cultivar of Industrial Hemp Fedora17
March 2010	Ministry of Health Medicines Control Approve Cultivar of Industrial Hemp Fedora17
March 2010	New Zealand Gazette No.32 Approved Cultivar of Industrial Hemp Fedora 17
June 2010	General Industrial Hemp Licence granted to Midlands Seed Ltd Approved Cultivars – Finola/USO31/Fedora17/Fasamo/Ferimon12
August 2010	OSE appoints Brand Manager for ' <b>new hemisphere™</b> '
August 2010	OSE releases Hemp Seed Oil Capsules under the ' <b>new hemisphere™</b> ' brand
Oct/November 2010	Appoint overseas distributor for the Japanese Supplement Market.
November 2010	General Industrial Hemp Licence granted to Oil Seed Extractions Ltd Approved Cultivar – Finola/USO31/Fedora17/Fasamo/Ferimon12
November 2010	General Industrial Hemp Licence granted to Midlands Seed Ltd Approved Cultivars - Finola/USO31/Fedora17/Fasamo/Ferimon12
December 2010	Markitable launches revised ' <b>new hemisphere™</b> ' website <a href="http://www.nzhempoil.co.nz">www.nzhempoil.co.nz</a>
January 2011	General Industrial Hemp Licence granted to Oil Seed Extractions Ltd Approved Cultivar – Finola/USO31/Fedora17/Fasamo/Ferimon12

## References

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Reference: DRG11485  
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09 845 1710  
vivienne.hassan@esr.cri.nz

17 November 2010

The Officer in Charge  
Oil Seed Extractions Limited  
PO Box 65  
ASHBURTON

Attention: Trudy Hodge

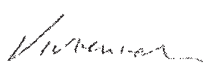
Name on file for reference: **OSE, Oil Seed Extractions**

On 11 November 2010, Vivienne Hassan of ESR, Auckland received from Trudy Hodge, by Post Haste Couriers B.MED. 04940641, a factory sealed brown glass bottle labelled in part "Hemp Seed Oil" containing a dark green viscous oil.

The liquid was analysed for the presence of tetrahydrocannabinol (also known as THC) using GC-MSD, and none was detected. The limit of detection for THC was less than 0.07% by weight.

The sample will be destroyed as part of our routine procedures. Please advise us as soon as possible if you would like it returned to you.

  
Authorising Scientist  
DRUGS GROUP

  
Ms Vivienne Hassan  
Case Manager  
DRUGS GROUP

Encl

FOR SCENE ATTENDANCE OR ADVICE ANYTIME  
TELEPHONE 0800 FORENSIC 0800 367 367





ESR Reference: DRG10615  
Enquiries to: Mrs Vivienne Hassan  
09 815 1710  
vivienne.hassan@esr.cri.nz

2 March 2010

Midlands Seed Limited  
PO Box 65  
ASHBURTON

Attention AR Davidson

#### HEMP PLANT ANALYSIS

Sample Identifier	Result % THC
Industrial Hemp cultivar USO 31	Less than 0.1
Industrial Hemp cultivar Ferimon 12	Less than 0.1

The level of THC in the plant samples provided are all below the limit set of 0.35% THC.

The cost of these analyses is \$900.00. An invoice will follow.

*S. M. Edmunds*

Authorising Scientist  
Drugs

*Vivienne Hassan*

Vivienne Hassan  
Case Manager  
Drugs

#### Distribution

Anita Parag  
Ministry of Health  
P O Box 5013  
WELLINGTON

- 2 MAR 2009

ESR Reference: DRG09593

Enquiries to: Mrs Vivienne Hassan  
09 815 1710  
vivienne.hassan@esr.cri.nz

24 February 2009

Midlands Seed Limited  
PO Box 65  
ASHBURTON


Attention AR Davidson


**HEMP PLANT ANALYSIS**

Sample Identifier	Result % THC
Industrial Hemp cultivar Fasamo SFF 101	Less than 0.1
Industrial Hemp cultivar Epsilon SFF 102	Less than 0.1
Industrial Hemp cultivar Santhica 27 SFF 103	Less than 0.1
Industrial Hemp cultivar Futura 75 SFF 104	Less than 0.1
Industrial Hemp cultivar Fasamo Mitcham Rd 101	Less than 0.1
Industrial Hemp cultivar Finola Mitcham Rd 102	Less than 0.1
Industrial Hemp cultivar USO 31 Mitcham Rd 103	Less than 0.1
Industrial Hemp cultivar Ferimon 12 Mitcham Rd 104	Less than 0.1
Industrial Hemp cultivar Fedora 17 Mitcham Rd 105	Less than 0.1
Industrial Hemp cultivar Felina 32 Mitcham Rd 106	Less than 0.1

The level of THC in the plant samples provided are all below the limit set of 0.35% THC.

The cost of these analyses is \$300. An invoice will follow.

  
**Authorising Scientist**  
**Drugs**

  
**Vivienne Hassan**  
**Case Manager**  
**Drugs**

**Distribution**

Anita Parag  
Ministry of Health  
P O Box 5013  
WELLINGTON



29 JAN 2008

ESR Reference: DRG08525  
Enquiries to: Mrs Vivienne Hassan  
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vivienne.hassan@esr.cri.nz

22 January 2008

Midlands Seeds Ltd  
PO Box 65  
ASHBURTON

Attention: AR. Davidson


#### HEMP PLANT ANALYSIS

Sample Identifier	Result % THC
Industrial Hemp cultivar Fasamo PPCS 101	Less than 0.1
Industrial Hemp cultivar Epsilon 68 PPCS 102	Less than 0.1
Industrial Hemp cultivar Santhica 27 PPCS 103	Less than 0.1
Industrial Hemp cultivar Futura 75 PPCS 104	Less than 0.1
Industrial Hemp cultivar Fasamo Mackenzie 101	Less than 0.1
Industrial Hemp cultivar Finola Mackenzie 102	Less than 0.1
Industrial Hemp cultivar USO 31 Mackenzie 103	Less than 0.1
Industrial Hemp cultivar Ferimon 12 Mackenzie 104	Less than 0.1
Industrial Hemp cultivar Fedora 17 Mackenzie 105	Less than 0.1
Industrial Hemp cultivar Felina 32 Mackenzie 106	Less than 0.1

The level of THC in the plant samples provided are all below the limit set of 0.35% THC.

The cost of these analyses is \$300. An invoice will follow.

  
Authorising Scientist  
Drugs

  
Vivienne Hassan  
Case Manager  
Drugs

#### Distribution

Derek Fitzgerald  
MEDSAFE  
Ministry of Health  
P O Box 5013  
WELLINGTON



COPY

23 JAN 2008

Reference: DRG08535  
Enquiries to: Ms Vivienne Hassan  
09 845 1710  
vivienne.hassan@esr.cri.nz

21 January 2008

Food Safety Technician  
Oil Seed Extractions Limited  
PO Box 65  
ASHBURTON

Attention: Mr Nigel Hosking

Name on file for reference: **OSE, Nigel Hosking**

On 16 January 2008, Janine Wilson of ESR, Auckland received from Mr Nigel Hosking, by Post Haste Couriers SML.08245800.1.7, a plastic jar labelled in part "Hemp Seed Oil MID 600" containing dark green oily liquid.

The liquid was analysed for the presence of tetrahydrocannabinol (also known as THC) using GC-MS, and none was detected. The limit of detection for THC was less than 0.1% by weight.

The sample will be destroyed as part of our routine procedures. Please advise us as soon as possible if you would like it returned to you.

Authorising Scientist  
DRUGS GROUP

Case Manager  
DRUGS GROUP

Encl

FOR AFTER HOURS SCENE ATTENDANCE OR ADVICE:	
PHONE:	0800 367 367
	0800 FORENSIC



098496046

ESR Reference: DRG07649  
Enquiries to: Mrs Vivienne Hassan  
09 815 1710  
vivienne.hassan@csr.cri.nz

7 February 2007

Midlands Seed Ltd  
PO Box 65  
ASHBURTON

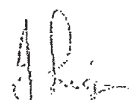
Attention: A.R. Davidson

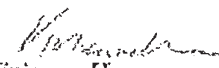
## HEMP PLANT ANALYSIS

Sample Identifier	Result % THC
Industrial Hemp cultivar Fasamo	Less than 0.1
Industrial Hemp cultivar Finola	Less than 0.1
Industrial Hemp cultivar USO 31	Less than 0.1
Industrial Hemp cultivar Ferimon 12	Less than 0.1
Industrial Hemp cultivar Fedora 17	Less than 0.1
Industrial Hemp cultivar Felina 32	Less than 0.1
Industrial Hemp cultivar Santhica 27	Less than 0.1
Industrial Hemp cultivar Epsilon 68	Less than 0.1
Industrial Hemp cultivar Futura 75	Less than 0.1
Industrial Hemp cultivar Beniko	Less than 0.1

The level of THC in the plant samples provided are all below the limit set of 0.35% THC.

The cost of these analyses is \$300. An invoice will follow.

  
Authorising Scientist  
Drugs

  
Vivienne Hassan  
Case Manager  
Drugs

## Distribution

Donna Jennings  
MEDSAFE  
Ministry of Health  
P O Box 5013  
WELLINGTON





Reference: DRG06718  
Enquiries to: Mrs Jenny Sibley

16 March 2006

Oil Seed Extractions Ltd.  
PO Box 65  
ASHBURTON

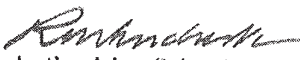
Attention: Mr Nigel Hosking


Name on file for reference: **Oil Seed Extractions Ltd**

On 7 March 2006, Janine Wilson of ESR, Auckland received from Mr Nigel Hosking, by Post Haste Couriers 2.TK.B.SG.07771371.1.0, a plastic bag marked in part "MIDLANDS SEED LTD Hempseed cake Batch 0306HC".

The bag contained 718.5 grams of cylindrical dark green pellets.  
No tetrahydrocannabinol (THC) was detected in the pellets.

Please complete and return the enclosed "Drug Destruction/Return Form" as soon as possible so exhibits may be returned or destroyed.

  
Authorising Scientist  
Drugs

  
Jenny Sibley  
Case Manager  
Drugs

Encl

FOR AFTER HOURS SCENE ATTENDANCE OR ADVICE: PHONE: 0800 367 367 0800 FORENSIC
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