FREEDOM TO OPERATE

MANUAL

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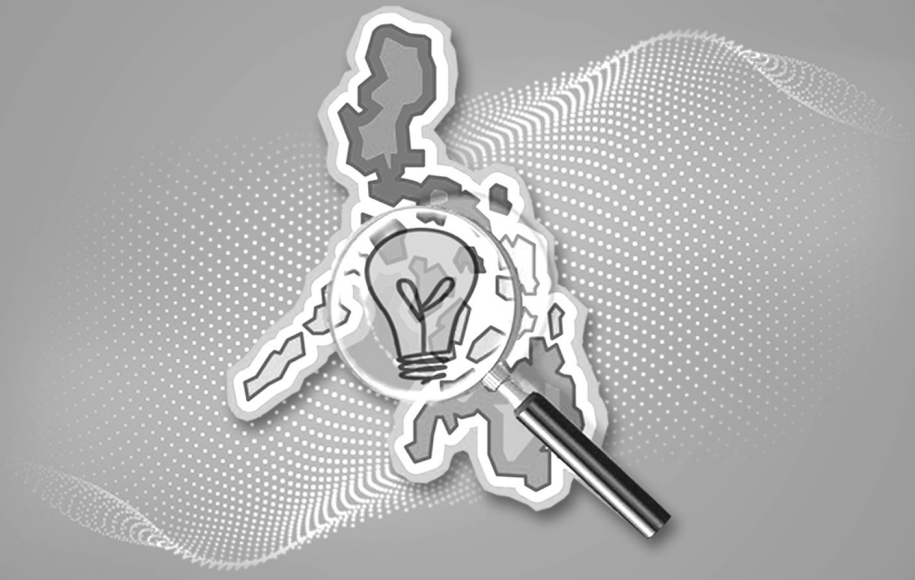

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Published by:
Technology Application and Promotion Institute (DOST-TAPI)
DOST Compound, Gen. Santos Avenue, Bicutan, Taguig City
Telephone (02) 837-2071 local 2160
ISBN: 978-971-718-102-8

ABOUT THE COVER

The cover illustrates the Freedom to Operate process including its scope and coverage. The magnifying glass elucidates the verification process that will be undertaken to determine whether a particular invention as represented by the light bulb has a blocking patent that will limit its commercialization activities. The map of the Philippines signifies the scope and coverage of the territorial search to be conducted.

Cover layout by Ramon D. Navarrete.
Layout design by Anna Liza B. Saet and Maria Teresa Andrea B. Vargas.

MESSAGE

Congratulations to the Technology Application and Promotion Institute (TAPI) for their dedication in the development and publication of the Freedom to Operate (FTO) Manual.

The FTO assessment in our country is still undergoing development, which is undoubtedly imposing major challenges for some government funding agencies and research and development institutes. Since commercialization is the ultimate test for the home-grown technologies that the Department of Science and Technology (DOST) is continuously developing, a standard FTO strategy would be a quick and practical approach for technology transfer.

With these in mind, TAPI developed this manual to set a benchmark in the science and technology (S&T) landscape in aiding challenges in transferring technologies. Moreover, this will certainly serve as a reference material that comprises a digest of vital information for all the researchers, government agencies, stakeholders, and the DOST community. It is also worth mentioning that this manual is a breakthrough as it is the first to be issued in the country.

It is hoped that this handbook will equip our licensing and negotiations teams in all our technology transfer-related endeavors and in the long run, benefit and be of service to the Filipino people.

FORTUNATO T. DE LA PEÑA
Secretary

MESSAGE

I wish to commend the Technology Application and Promotion Institute (DOST-TAPI) for taking the initiative to prepare this Freedom-to-Operate (FTO) Manual. It is a timely solution to the pressing problem in FTO assessment that plays an essential role in technology transfer.

The Department of Science and Technology (DOST) spearheads various Research and Development (R&D) programs that produce new technologies, products, processes and services. FTO is inarguably a critical part in the R&D process.

Science and Technology development stakeholders such as research and development institutions, government agencies, the private sector and the science community are working together to accelerate the FTO process.

This manual will contribute to the on-going harmonization in the FTO process to address the need to maximize the use of science, technology and innovation (STI), which will eventually impact the society and the economy.

In writing this manual, TAPI is enabling technology transfer in the country through the FTO mechanism. I am certain that this publication will expand the translation of research and development outputs for the benefit of society.

ROWENA CRISTINA L. GUEVARA, PhD
Undersecretary for Research and Development
Department of Science and Technology

FOREWORD

In 2017 , the very first training on Freedom-to-Operate (FTO) in the Philippines was conducted through the efforts of our agency, the Technology Application and Promotion Institute of the Department of Science and Technology (DOST-TAPI) and the Philippine Council for Agriculture, and Natural Resources and Development (PCAARRD), in order to address long-standing clamor for such capacity building. TAPI and PCAARRD have long been innovation partners that resulted in spearheading the implementation of various projects in technology transfer, intellectual property rights, fairness opinion report, valuation, and FTO.

For a specific technology to legally commercialize, a series of processes and evaluations is ideally conducted and FTO is one of the crucial tools that need to be prepared. FTO analysis is vital if there is already an existing patent, trademark or other intellectual property rights that would effectively block the success of a certain technology. By initiating FTO, technologies, inventions and researches can avoid potential infringement of IP-protected commercial products in the market and the analysis can also be useful in developing other strategies to ensure technology transfer success.

For years, DOST-TAPI has been focused to improve and scale up the FTO mechanism in a precise and systematic manner that can fuel the thrust towards the success of a technology.

With this, I am immensely pleased that through the relentless efforts, commitment and single-minded devotion of TAPI specialists, this manual is prepared to synthesize and reframe the FTO practice for all researchers, technologists, and actors in technology transfer and commercialization. This shall also support and nurture the process and thereby contribute to more effective and efficient technology transfer-related programs.

EDGAR I. GARCIA
Director
Technology Application and Promotion institute
Department of Science and Technology

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PREFACE

This Manual is an attempt to teach the basic concepts of and provide simplified explanations on Freedom to Operate (FTO), an activity that aims to determine if a technology can be freely commercialized in the Philippines and to avoid the risk of infringing third-party intellectual property rights (IPR). Prepared by selected specialists of the Technology Application and Promotion Institute (TAPI), an agency under the Department of Science and Technology (DOST), who are composed of intellectual property (IP) lawyers, patent agents, and other IP or technology transfer specialists, this Manual offers a valuable resource that will serve as a basic guide in the conduct of an FTO search and the preparation of an FTO search report.

Republic Act No. 10055 (RA 10055), otherwise known as the "Philippine Technology Transfer Act of 2009", requires the DOST system to transfer the technologies, generated from R&D funded by its Councils, to possible adopters for commercialization purposes, so as to maximize the benefits from the use of the taxpayers' money. However, a challenge that regularly faces any government funding agency (GFA) or research & development institution (RDI) is how to perform due diligence for technology commercialization. For instance, while the DOST Secretary is mandated to issue a Fairness Opinion Report (FOR) in the transfer of government-funded projects, to determine whether or not a proposed arrangement or agreement is fair to the government, both of the funding and R&D-implementing agencies of the DOST are always challenged in complying with the requirements of the law. The FOR is prepared by the Fairness Opinion Board (FOB), a three-member experts' group that is convened to assess whether a proposed transaction is fair to the government. To appropriately draft the FOR, it is ideal that a due diligence of the subject technology is made by the Requesting Party, whether the GFA or the RDI,

which would include assessing the strength of the technology in terms of its IP protection.

The assessment of the strength of a technology's IP protection requires the expertise of an IP specialist. An important question to address is whether the subject technology can be produced or sold in the Philippines, without infringing the existing IPR of third parties. As the TAPI gets more and more engaged in the technology transfer activities of the DOST, there is a realization that technology managers and negotiators are inexperienced in determining if the technologies offered, even though covered with patent protection, can take off smoothly without the risk of infringement.

An FTO assessment is a precautionary measure in the business realm to determine and avoid possible IP infringement. It identifies valid patent claims that can potentially block technology commercialization. This activity addresses the risks associated with the possible infringement of the government-funded technologies by obtaining FTO reports prior to commercialization.

The TAPI's goal in the publication of this Manual is to provide researchers with basic information and guide in conducting an FTO search and preparing an FTO report. This Manual is the result of TAPI's experience in FTO assessment, which we hope will benefit the DOST community, other government agencies, and researchers in the commercialization of government-funded technologies in the Philippines.

CHAPTER I
INTRODUCTION

Intellectual property (IP) can be the most important asset of an organization, the value of which can even surpass fixed and other capital assets of the company. However, unlike the ownership of real property, the ownership of IP does not always mean that the owner can exploit the same without fear of encroaching upon another IP owner's rights. In the sale of a parcel of land, for instance, the buyer only needs to ensure that the title is in the name of the seller and that there is no encumbrance to the property. As such when the sale is consummated, the buyer is given the absolute right to enjoy, use or dispose of the property in any manner during his or her lifetime. On the other hand, the sale of IPR to an invention requires more than ensuring that the registration is in the name of the inventor or the patent holder. It is important, for example, to verify whether or not the patent is active. An invention covered by a lapsed or expired patent becomes part of the public domain. The buyer, as well as other interested parties, can use the technology freely as the exclusivity afforded by patent protection is lost.

*IP can be the **most important** asset of an organization.*

Technology commercialization, therefore, requires the conduct of due diligence by both parties to the transaction. The Licensee (buyer) would want to know if the price they are paying is worth the return they will receive. They would also like to understand the risks involved, if any. Otherwise, they will have to rely merely on the Licensor's contractual warranties, subject to the

*It is important to verify whether or not the **patent is active!***

principle of "caveat emptor" or "buyers beware". Normally the Licensee conducts due diligence once negotiations for licensing has started or is imminent.

On the other hand, a Licensor may want to verify the status of its IPR protection even before the invention is offered for sale, license or investment. The Licensor has to check the metes and bounds of its IPR and whether there are "skeletons in the closet" that have to be disclosed and discussed during the negotiation process, in order that the Licensee will be prepared to assume the risks involved in commercialization. Patent litigation can be a very expensive, uncertain, tedious and risky undertaking. Oftentimes, the Licensor will secure an FTO to determine if it can proceed with commercialization with minimal risk of infringing the IPR of others. In doing so, the Licensor will be able to justify the valuation and price of its IP to the other party.

A. WHAT IS "FREEDOM TO OPERATE"

"Freedom to Operate" or FTO is a due diligence process undertaken by IP rights owner to determine potential risks of infringing activity or patent barriers in commercialization. This procedure includes the careful examination by the IP rights owner of the patent claims of the third party, in force patents as against his claims to weight and possibly calculate the extent of infringement.[1]

B. FTO SEARCH DISTINGUISHED FROM PATENTABILITY SEARCH

While both processes involve a search for relevant patents, FTO and patentability search differ in the following aspects:

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[1] *Kowalski, Preiss, Chiluwal, & Cavicchi, J. (February 17, 2011). Freedom to Operat, Product Deconstruction and Patent Mining. New Hampshire. Retrieved from https://www.wipo.int/edocs/mdocs/mdocs/en/wipo_ip_wk_ge_11/wipo_ip_wk_ge_11_ref_3_kowalski.pdf*

Area	Patentability Search	Freedom to Operate
1. Objective	To find out whether claims to inventions would be novel and non-obvious in view of everything that has been published.	To find out whether a certain product or process would infringe patent claims granted to others.
2. Purpose	For registration	For commercialization
3. Coverage	Published information which may or may not be covered by an IP registration	Patented/registered inventions/rights
4. Use	To determine novelty and inventiveness for registration purposes	To determine the risk of infringing IP rights of others
5. When conducted	Before the conduct of research and development	Before offering the technology for license, sale and/or investment
6. Person of interest	Researcher, inventor, funding agency	Parties to the negotiation (e.g. licensor, licensee)
7. Area	Worldwide, wherein novelty tests, for instance, are conducted from patent and non-patent databases from around the world. In this case, novelty must be tested worldwide.	Jurisdiction-specific, wherein test is done in the country of interest (i.e., where commercialization shall take place). For the purpose of this Manual, area will be limited to the Philippine jurisdiction.

C. CONDUCTING AN FTO SEARCH

RA 10055 aims to promote and facilitate the transfer, dissemination, effective use, management and commercialization of the IPR, technology, and knowledge resulting from the R&D funded by the government, for the benefit of the national economy and taxpayers. It is essential in the technology transfer activity to conduct an FTO search to avoid or minimize the risks of infringing third party IPR.

*...conduct an **FTO search** to avoid or minimize the **risks of infringing** third party IPR*

1. Why an FTO Search is Necessary

The FTO search report is one of the requirements for the preparation and issuance of a Fairness Opinion Report (FOR) in the transfer of government-funded projects. FOR is necessary to determine whether or not a proposed transaction, such as a licensing agreement, is fair to the government. The conduct of an FTO search plays a fundamental role in the determination of whether or not it is beneficial to proceed with the proposed technology transfer as well as the terms thereof.

2. Purposes and Benefits of an FTO Search

The following are some of the reasons for, and the benefits of, conducting an FTO Search:

a. Assess infringement risks - A patent grants the patent holder the right to exclude unauthorized third parties from making, using,

selling and commercially dealing in the patented invention for a limited period of time. Infringement of a patent means the violation of any of the monopoly rights granted to the patentee. The assessment of infringement risks through the conduct of an FTO helps to identify existing third-party IPR within the jurisdiction and further avoids the litigation cost that may be incurred due to unintentional infringement.

b. Uncover licensing requirements and commercial opportunities – There are instances where an FTO search will uncover essential IPRs held by a third party or competitor, which may become roadblocks to the successful commercialization of a technology. An FTO search provides a good opportunity, prior to commercialization, to explore possible licensing or other commercial agreements with the IPR holder, which will not only avoid possible infringement but which may be commercially lucrative for all parties involved. An FTO search is also a useful method for tracking the expiration of third party IPR, to effectively plan the proper timing of a technology's entry into the market.

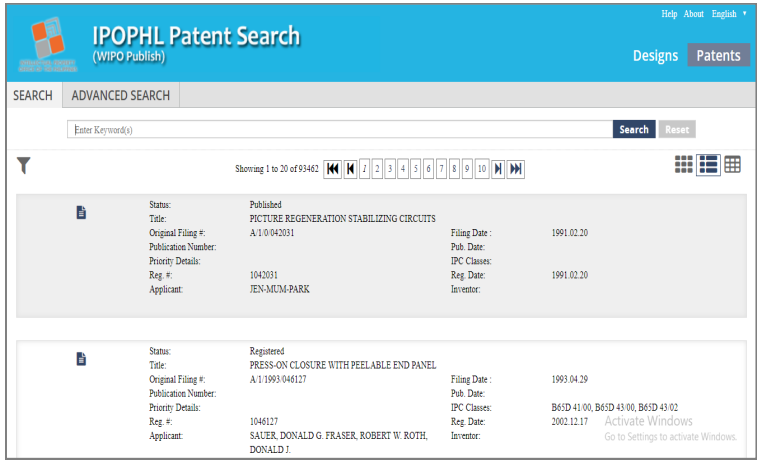
FTO search *helps to* ***effectively plan*** *the proper timing of a technology's entry into the* ***market.***

c. Provide direction to R&D activities – Conducting an FTO search also provides an opportunity to identify essential technologies that can be modified or tweaked, without infringing relevant IPR. R&D activities may be directed to develop products and processes that would not anticipate any infringement.

D. WHERE TO SEARCH

Considering the territorial nature of patents, these are only enforceable in the country or region in which they are granted. For example, if a patent for a certain technology was granted in the Philippines but not in Country X, the use and practice of said technology in Country X do not infringe the patentee's exclusive rights simply because it has no patent in Country X. Thus, for purposes of assessing infringement risks, an FTO search should be conducted with regard to valid patents in the territory where commercialization will be undertaken.

For commercialization activities in the Philippines, an FTO search of all valid patents granted in the Philippines should be made. The search can be done using the patent database of the Intellectual Property Office of the Philippines (IPOPHL), which is accessible at www.ipophil.gov.ph. Below is the interface of the IPOPhil's search platform:



All active and enforceable patents, or patents that are not yet expired or lapsed/forfeited, can be cited as prior art to be considered in the search. Expired patents under Republic Act 165 (with validity of 17 years from the date of grant) and under Republic Act 8293 (with validity of 20 years from application date) and lapsed/forfeited patents (for failure to pay maintenance fees or annual fees) will not be considered since these already belong to the public domain. Anyone can use, manufacture or sell the technologies covered by expired or lapsed patents.

The methods of conducting an FTO search, using publicly available patent databases, are illustrated in the next chapter.

*FTO search plays an important part in establishing the areas to which **R&D** and **commercial-lization** activities should be directed*

E. WHO SHOULD CONDUCT THE FTO SEARCH

The inventor or the technology owner may conduct an FTO search even in the early stages of the product or process development. While it is understood that an FTO search is not usually done by the researchers themselves due to the complexity and nuances that comes with it, it would be a good practice for researchers to know how to perform an FTO search. This would give the researchers a timely caution with regard to possible infringement. An FTO search also plays an important part in establishing the areas to which R&D and commercialization activities should be directed.

An FTO search and analysis usually accompanies a clearance opinion prepared by the patent counsel, which forecasts the potential for the autonomy of a pending patent application or an issued patent's claim/s.[2] A patent counsel in the Philippines refers to a lawyer who specializes in IP and is one who is licensed to practice law by the Supreme Court. A clearance opinion, in this case, would refer to a legal opinion on the FTO of a particular subject technology.

The forecast in the FTO analysis will be used as critical information not only by the technology owner or the funding agency but also by the potential parties to the negotiation. The potential sale, spin-off or license agreement that revolves around the technology would be relying on the forecast and analysis resulting from the FTO search.

[2] *Hunt, D., Nguyen, L., & Rogers, M. (2007). Patent Searching Tools & Techniques. New Jersey: John Wiley & Sons, Inc.*

CHAPTER II
CONDUCTING AN FTO SEARCH

A good FTO report depends on the quality of the information that the FTO analyst obtained and assessed. There is no other way but to perform an FTO search that is directed to identifying all potentially blocking patents. For a new practitioner, FTO search can be merely viewed as a prior art search, with all the intricacies and specialized techniques that must be done. The tools and techniques are similar, however, prior art search looks into worldwide documents while FTO is focused on the patent database in a country of interest.

FTO search that is directed to identifying ***all potentially blocking patents.***

In a prior art search, the results are expected to identify novelty-destroying information or documents that were disclosed anywhere in the world prior to the subject technology. In an FTO search, on the other hand, the results are expected to yield existing patent rights for a product or process in a particular jurisdiction.

The following is a set of simple steps to conduct FTO search:

Step 1. Determining the Scope of the Search

The FTO analyst is encouraged to get ready with basic information on the subject matter as this would be used as input to the search and assessment. The scope will allow the FTO analyst to search for patents filed in the country of interest, such as the Philippines, where the technology is

intended to be marketed. The same input will also allow the FTO analyst to decide whether both expired and unexpired and all available non-patent literature shall be needed.[3]

i. Granted Patents

These may include (a) granted and active (in-force) patents with the renewal fee having paid, (b) lapsed patents due to non-payment of renewal of fees, with the option of being reinstated, thus, these patents should be tracked until the time reinstated date has lapsed, (c) lapsed patents due to non-payment of renewal of fees, without the option of being reinstated. As to Items (a) and (b), these patents pose risk in the commercialization of the proposed technology thus, caution should be exercised. However, as to Item (c), these patents present no risk at all for infringement and are a good target for acquisition or may be free to use upon confirmation of their status.

ii. Patent Applications

These patents pose potential future risks and may eventually impact the FTO of the proposed technology especially (a) patents awaiting examination and (b) patent applications undergoing prosecution. As to abandoned patent applications, these may not pose risk at all provided the confirmation that there is no pending family application.

iii. PCT Applications

Foreign patents entering the (Philippine) national phase should also be considered as they may also pose impact in the FTO of the proposed technology which is also intended to be commercialized in the Philippines.

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[3] *Hunt, D., Nguyen, L., & Rogers, M. (2007). Patent Searching Tools & Techniques. New Jersey: John Wiley & Sons, Inc.*

iv. Non-Patent Literature (NPL)

Although NPL may not be significantly relevant in the clearance search as they do not pose potential threats to the release of the proposed technology, they are useful in identifying possible competitors in the market and in determining if there are ways to work around the technology.

Step 2. Preparing for the Search

i. Properly scoping the subject matter

*Scoping the subject matter is important to determine the **key features** of the invention.*

Scoping the subject matter is important to determine the key features of the invention and answer the following questions: (a) What is the invention?; (b) What problem does the invention solve?; and (c) What does the invention do?

Let's consider the example below of an actual technology assisted by TAPI through the PCAARRD-FTO Project:

An extender formulation for artificial insemination packed in sachet form comprising: a soybean lecithin as non-penetrating cryoprotectant; a formulated buffer solution consisting of Tris (hydroxylamino) methane of 3.028g; citric acid of 1.675g and fructose of 1.25g diluted in 100mL of distilled water; and a formulation of the semen extender consisting of 73% buffer solution, 20% non-penetrating cryoprotectant, and 7% penetrating cryoprotectant. The semen extender has a pH range of 6.2-7 and improves the post-thaw motility of the spermatozoa from 30%-50%. It also improves the viability of spermatozoa stored

under refrigerated condition from 96 hours to 110 hours and may be packaged in PET/PE/foil materials for ease in commercialization.

a. What problem does the invention solve?

The biological and functional changes that may occur to the sperm cells in cold preservation especially during the freezing step.

b. What is the invention?

An extender formulation for artificial insemination packed in sachet comprising of:

- a soybean lecithin as non-penetrating cryoprotectant;
- a formulated buffer solution consisting of Tris (hydroxylamino) methane of 3.028g;
- citric acid of 1.675g and fructose of 1.25g diluted in 100mL of distilled water; and
- a formulation of the semen extender consisting of 73% buffer solution, 20% non-penetrating cryoprotectant, and 7% penetrating cryoprotectant.

c. What does the invention do?

- improves the post-thaw motility of the spermatozoa from 30%-50%
- improves the viability of spermatozoa stored under refrigerated condition from 96 hours to 110 hours

ii. <u>Properly scoping the classification of matters to be searched</u>

The use of the various relevant patent classification systems such as the International Patent Classification (IPC) and

Locarno can be utilized. The IPC provides for a hierarchical system of language independent symbols for the patent classification of patent and utility models according to the different areas of technology. Locarno classification on the other hand, is for classification of Industrial Designs.

International Patent Classification and Locarno can be utilized.

Applying this to our example: The IPC code for the "Goat Semen Extender" may fall under IPC code 01N1/02 Preservation of living parts; and IPC code A0N1/0226 (Physiologically active agents, i.e. substances affecting physiological processes of cells and tissue to be preserved, i.e. anti-oxidants or nutrients.

iii. Properly generating proper text queries

Use of text search operators such as the following:

a. Boolean operators – for finding unions, intersections, and subtractions from data sets using "AND", "OR" and "NOT";
b. Proximity operators – for finding words within a defined perimeter of other words using "ADJ", "NEAR", "WITH", "SAME";
c. Truncation limiters – word stemming where symbols such as * may be located in the front or back of the root word for detecting varying derivatives of the same.

*Use **boolean**, **proximity** and **truncation limiters** as text search operators.*

From the previous example, below are the search strings used by the Fortun, Narvasa Salazar Law Office, the contracted law firm for the FTO search, using the text query in the IPOPHL website: Goat Sperm Extender, Goat Sperm, Sperm Extender, Goat Extender, Goat, Sperm.

The following are FTO search results for various DOST-funded projects conducted by contracted law firms:

1. FTO search result for the "Ethnobotanical Dewormer Composition for Native Chicken" (2-2012-000524) of Capiz State University from Baranda and Associates, using Boolean operators and truncation limiters in the IPOPHL website:

IPOPHIL PATENT SEARCH DATABASE	No. of Hits
Areca catechu	7
Leucaena leucocephala	8
Ethnobotanical	4

2. FTO Search result for "Protein-Enriched Copra Meal" of the Philippine Rice Research Institute, from RevoIPmente using Boolean operators and truncation limiters in the IPOPHL and Espacenet databases:

Search string	IPOPHL database		Espacenet database, PH
	Patents	UM	
"Copra meal"	3	2	5
"copra meal" AND ferment*/copra AND meal AND ferment*	1	0	0
"copra meal" AND inoculant*	0	0	0
"copra meal" AND Aspergillus	0	0	0
"copra meal" AND protein/ copra AND meal AND protein	1	1	3
"copra meal" AND feed	1	2	4

Step 3. Conducting the Search

In conducting FTO search, the primary document in consideration is a patent document. Although Non-Patent Literature (NPL) is one of the sources of information for FTO, their best use would be in identifying possible competitors in the market and in determining if there are ways to work around the technology.

In the initial stage of FTO search, the FTO analyst should gather patent documents that are relevant to the subject matter. The reliability of the searched documents may depend on the tool used for the search and the expertise of the FTO analyst in determining which documents to choose.

After identifying the relevant patent documents, the FTO analyst is expected to review each patent document to determine how closely each of them is related to the subject matter. In analyzing the patent document/s, the focus of attention is the claims since these define the scope of protection of the invention. However, one should not limit the search around the claims of the invention. Other parts of the patent specification must also be considered to gather more information as to the similarity of the inventive feature of the invention in hand compared to the document/s being searched. The following parts of the patent specification may be considered in the search:

1. Title;
2. Abstract;
3. Detailed Description of the Invention;
4. Claims; and
5. Drawings.

*The primary document in consideration is a **patent document.***

1. Title

The Title[4] is usually accessed first when searching for a patent document. The Title appears as a heading of the patent specification. However, it is given less attention when looking for relevant information about the patent document. Of course, looking at the Title is a good start in a search since it is usually short, specific and descriptive.

For example, if the invention is about a shredder machine, the FTO analyst may want to look at patent documents with word "shredder" in the title (i.e. "Improvements in or relating to Shredder/Grater Machine – Inv. Benjamin Almeda). Alternative terms may be included in the keywords, such as the use of synonymous words (i.e., cutter, stripper) or Boolean characters (i.e., shred?. shred*) to increase the hits or expand the search results. Although the Title can be considered as the least reliable when it comes to relevancy to the subject matter, it is usually the starting point of an FTO search.

2. Abstract

An Abstract is a concise summary of the disclosure of the invention. It usually consists of not more than 150 words. The content of the abstract contains the technical problem, the gist of the solution of the problem through the invention and the principal use of the invention. It is possible that some of the keywords used in the search will appear in the abstract.

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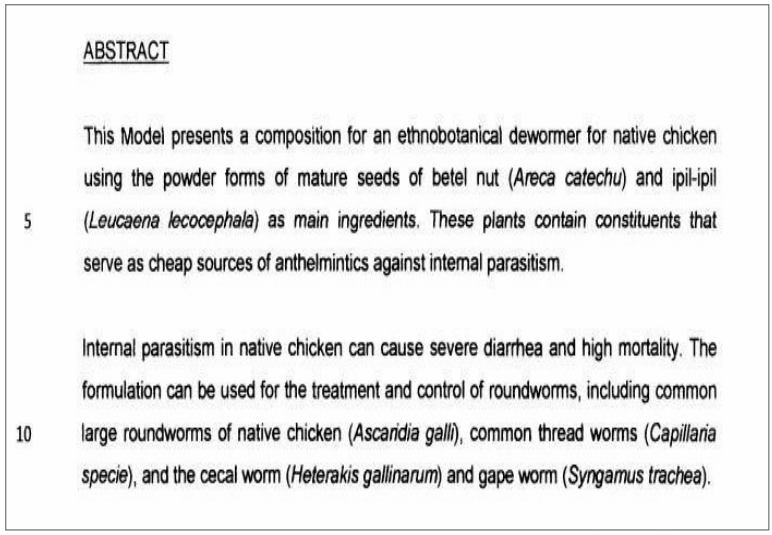
[4] *Rule 410 and 1410.1 of the revised IRR for Patents, Utility Models and Industrial Designs, state:*

Rule 410. Title of the Invention. – The title of the invention shall be as short and specific as possible. It shall appear as a heading on the first page of the description. The title shall be in technical terms particularly referring to the technical feature or features of the invention. All fancy names are not permissible in the title.

Rule 1410.1. Title. – The title of the utility model should be as short and specific as possible. It should appear as a heading on the first page of the description. The title shall be in technical terms particularly referring to the technical feature or features of the utility model. All fancy names are not permissible in the title.



ABSTRACT

This Model presents a composition for an ethnobotanical dewormer for native chicken using the powder forms of mature seeds of betel nut (*Areca catechu*) and ipil-ipil (*Leucaena lecocephala*) as main ingredients. These plants contain constituents that serve as cheap sources of anthelmintics against internal parasitism.

Internal parasitism in native chicken can cause severe diarrhea and high mortality. The formulation can be used for the treatment and control of roundworms, including common large roundworms of native chicken (*Ascaridia galli*), common thread worms (*Capillaria specie*), and the cecal worm (*Heterakis gallinarum*) and gape worm (*Syngamus trachea*).

But as with the Title, the Abstract is not a reliable source of information when it comes to the relevancy of the invention with the patent documents, although for a novice searcher, the Abstract may provide information on the potential relevant information.

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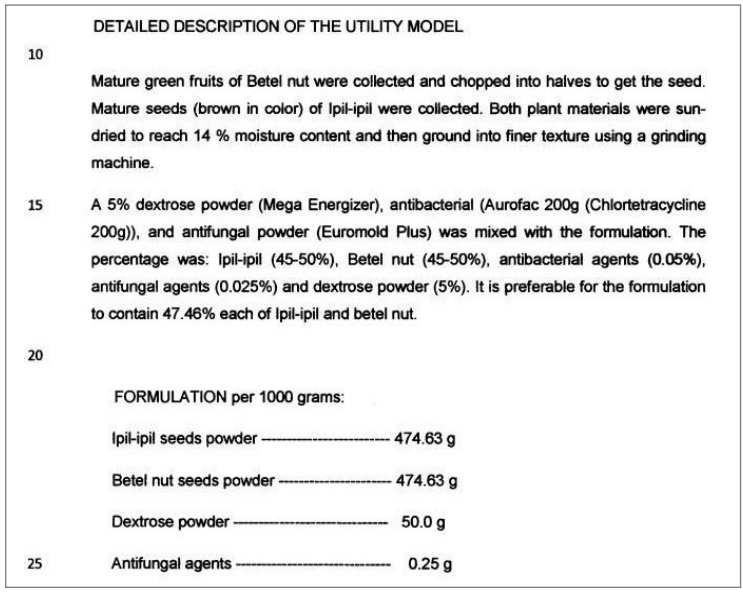
[5] *Rule 411 and 1410.8 of the revised IRR for Patents, Utility Models and Industrial Designs, state:*

Rule 411. Abstract of the Disclosure. – The abstract shall be written in a separate sheet with the heading, "Abstract of the Disclosure." It shall consist of a concise summary of the disclosure of the invention as contained in the description, claims, and drawings in preferably not more than one hundred fifty (150) words. It must be drafted in a way which allows the clear understanding of the technical problem, the gist of the solution of that problem through the invention, and the principal use or uses of the invention. The abstract shall merely serve for technical information. Preferably, the scope of the invention should be disclosed such that it can serve as an efficient asis for search in the particular technical field.

Rule 1410.8. Abstract of the Disclosure. –The abstract must be written in a separate sheet with the heading, "Abstract of the Disclosure." It shall consist of a concise summary of the disclosure of the utility model as contained in the description, claims, and drawings in preferably not more than one hundred fifty (150) words. It must be drafted in a way which allows the clear understanding of the technical problem, the gist of the solution of that problem through the utility model, and the principal use or uses of the utility model. The abstract shall merely serve for technical information. Preferably, the scope of the utility model should be disclosed such that, it can serve as an efficient basis for search in the particular technical field.

3. Detailed Description of the Invention

We know that the embodiment of the invention is recited in the Claim portion of the patent specification. However, the recited embodiments must be present or mentioned in the detailed description[6] of the invention. This part of the patent specification contains a complete description



DETAILED DESCRIPTION OF THE UTILITY MODEL

Mature green fruits of Betel nut were collected and chopped into halves to get the seed. Mature seeds (brown in color) of Ipil-ipil were collected. Both plant materials were sun-dried to reach 14 % moisture content and then ground into finer texture using a grinding machine.

A 5% dextrose powder (Mega Energizer), antibacterial (Aurofac 200g (Chlortetracycline 200g)), and antifungal powder (Euromold Plus) was mixed with the formulation. The percentage was: Ipil-ipil (45-50%), Betel nut (45-50%), antibacterial agents (0.05%), antifungal agents (0.025%) and dextrose powder (5%). It is preferable for the formulation to contain 47.46% each of Ipil-ipil and betel nut.

FORMULATION per 1000 grams:

Ipil-ipil seeds powder ---------- 474.63 g

Betel nut seeds powder ---------- 474.63 g

Dextrose powder ---------- 50.0 g

Antifungal agents ---------- 0.25 g

[6] *Rule 1410.6 of the revised IRR for Patents, Utility Models and Industrial Designs, states:*

Rule 1410.6. Detailed Description. – The detailed description must completely specify the manner of making and using ofthe utility modelto enable the person having ordinary skills in the art to understand and practice the same; setting forth the precise and exact utility model as claimed; distinguishing the utility model from the relevant prior art it pertains to; and indicating the technical problem solved by the utility model.

The provisions regarding the requirements for the detailed description as provided for in Part 4, Rules 405, 406, 406.1, 407, 408, and 409 of the Regulations for Patents shall apply, mutatis mutandis, to the detailed description for utility models.

of the manner of making, constructing, compounding, and using the invention. Since the detailed description basically provides all information about the invention, it will reveal a lot more about the relevancy of the cited patent document against the present invention. It is also in the detailed description where one can find a way to work around an invention so that the drafted claim of the present invention may not infringe claims of the cited patent document.

4. Claims

The Claim[7] defines the scope of the invention. It recites the elements and the limitation of the claims. However, there is a possibility that only one embodiment, methodology, process, is recited in the Claims and some features of the invention may have been left out. So it is still advisable to look into the detailed description as to the patentability of the present invention.

CLAIMS:

What is claimed is:

1. An ethnobotanical dewormer composition for native chickens comprising the following:
   - Ipil-ipil seeds (*Leucaena leucocephala*) powder (45-50%);
   - Betel nut seeds (*Areca catechu*) powder (45-50%);
   - Antibacterial agents (0.05%);
   - antifungal agents (0.025%); and
   - dextrose powder (5%).
2. An ethnobotanical dewormer composition according to Claim 1, wherein the ipil-ipil seed and betel nut seed powder are both 47.46% of the composition.
3. An ethnobotanical dewormer composition according to Claim 1, wherein the dosage is 2 g per kg bodyweight of native chicken.

For an FTO search, the main consideration is the Claim.[7] In analyzing the Claim, one of the important things to remember is that specific disclosures are novel over generic disclosures. For example, if the claim of the present invention is a specific metal, aluminum over the generic "metal" claimed by the cited invention, then the present invention may claim novelty and avoid infringing the cited invention.

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[7] *Rule 415 & 1410.7 of the revised IRR for Patents, Utility Models and Industrial Designs*

Rule 415. Claims.

a. *The patent application must conclude with a claim, particularly pointing out and distinctly claiming the part, improvement, or combination which the applicant regards as his invention.*
b. *The application may contain one (1) or more independent claims in the same category (product, process, apparatus, or use), where it is not appropriate, having regard to the subject matter of the application, to cover this subject matter by a single claim which shall define the matter for which protection is sought. Each claim shall be clear, concise, and supported by the description.*
c. *One (1) or more claims may be presented in dependent form, referring back and f urther limiting another claim(s) in the same application. Any dependent claim which refers to more than one other claim (multiple dependent claim) shall refer to such other claims in the alternative only. A multiple dependent claim shall not serve as a basis for any other multiple dependent claim.*
d. *The claims must conform to the invention as set forth in the description and the terms and phrases used in the claims must find clear support or antecedent basis in the said description so that the meaning of the terms may be ascertainable by reference to the description. Claims shall not, except where absolutely necessary, rely in respect of the technical features of the invention, on reference to the description or drawings. In particular, they shall not rely on references such as, "As described in part xxx of the description" or "As illustrated in figure xxx of the drawings."*
e. *If the invention relates to an improvement, the claim or claims should specifically point out and distinctly claim the improvement in combination with a preamble statement indicating the prior art features which are necessary for the definition of the claimed subject matter.*

Rule 1410.7. Claim.

The claim(s) must define the subject matter of the utility model for which registration is sought. Such claim(s) should be clear and concise and fully supported by the description.

If the utility model application relates to an improvement, the claim(s) should specifically point out and distinctly claim the improvement in combination with a preamble statement indicating the prior art features which are necessary for the definition of the claimed subject matter.

The claim requirements as provided for in Part 4, Rules 415 (a), (c), (d), and 416 of the Regulations for Patents shall apply, mutatis mutandis, to claims for utility models.

5. Drawings

Just like the detailed description, drawings[8] can be a source of information that may be relevant to the present invention. The effectiveness of gathering relevant information will depend on the FTO analyst's understanding of the cited invention.

***Drawings** play an important part in understanding how the invention works.*

As such, drawings play an important part in understanding how the invention works. In fact, when the invention being searched belongs to the "crowded art" or similar products in the market, it may be easier to search in the drawings their relevancy over the present invention. By comparing side by side the drawings of the present invention over the cited invention, one may easily spot their differences or similarities as opposed to reading the texts of the detailed description.

It is clear that in conducting FTO searches, not only a number of patent documents must be considered but also the patent specifications in each of the document. So how do professional searchers go through documents very quickly? How do they decide on what documents to keep?

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[8] *See Rule 413-414 of the revised IRR for Patents, Utility Models and Industrial Designs. In particular, Rule 413b states:*

b. When the invention relates to an improvement of the prior art, the drawing must exhibit, in one or more views, the novel or inventive improvement in relation with the old structure presented in dotted lines. Every element of the invention as shown in the drawing shall be designated with legible reference numeral or letter and, if appropriate, shall be accompanied by a pointing line directed to such particular element being referred to. The designated reference numeral or letter for a particular element shall be in conformity with what has been described or referred to in the detailed description.

The answer could be the method of the hierarchical decision tree. The FTO analyst uses any combination of the patent specification (title, abstract, etc.) to decide whether the relevant subject matter is met. For example, if the FTO analyst starts with a title of the invention and finds relevant feature/s, then he goes to the next part which may be the abstract or go straight to the detailed description. However, if the FTO analyst finds no relevant or core feature in the title, then the other parts of the patent specifications may already be excluded from the search. It should also be noted that it is not necessary to start the search from the title. The search may start at the claims or drawings then proceed to the detailed description to see how the invention was discussed.

CHAPTER III
METHODS AND STRATEGIES

Even though a patent has been granted to the Inventor, it is not a full guarantee that the technology can be exclusively made, used, offered for sale, or distributed by the patentee.[9] FTO provides the appropriate tools to assess the likelihood of infringement by identifying potentially blocking patents that would effectively indicate the limitations of the technology. This is done by marking the boundaries within which a particular patent can be worked without intruding another's territory, so to speak. This principle is applicable regardless of which side the FTO analyst works for: Is he looking for potential infringers or does he belong to a company of potential infringers? It is also applicable regardless of the status of IP protection of a particular product or process that will be commercialized.

A. Basic Considerations

Blocking patents *may be subjected to analysis to know if the* ***patent is invalid***

In order to appreciate the methods and tools that can be used to perform FTO, the FTO analyst needs to consider the following:

a. An FTO search may be done for a product regardless of patent protection

An FTO search may be conducted even if a subject technology has patent protection (i.e., whether the patent is still pending or already granted) or none at all. This all boils down to the actual product that a consumer will decide to buy

ABOUT TAPI

The Technology Application and Promotion Institute (TAPI) created by virtue of Executive Order No. 128 on 30 January 1987, is one of DOST's service agencies whose primary responsibility is to promote the commercialization of technologies and market the services of other operating units of the Department.

On 28 April 1992, TAPI's function was expanded by virtue of RA 7459 otherwise known as the "Inventors and Invention Incentives Act of the Philippines". Among others, TAPI administers the Invention Development Assistance Fund for the initial experiments and prototype development and other invention-development related activities.

VISION STATEMENT

A strategic partner in advancing national socio-economic growth by advocating a culture of innovation and promoting globally-competitive and useful technologies.

MISSION STATEMENT

TAPI shall promote an effective and efficient innovation system towards the adoption and utilization of inventions, innovations, and services.

IMPLEMENTATION

To attain this mission, TAPI shall:

- Encourage the use of the intellectual property system and provide IP and IP-related services;
- Provide comprehensive assistance packages for inventions/ innovations;
- Actively support activities geared towards the promotion of creativity and capacity-building within the innovation system;
- Facilitate business development of technologies; and
- Promote and strengthen partnerships and linkages with and among stakeholders.

MANDATED FUNCTIONS

- Serve as the implementing arm of the DOST in promoting the commercialization of technologies and in marketing the services of the other operating units of the Department;
- Undertake contract research, particularly at pilot plant and semi-commercial stage;
- Provide technical consultancy including engineering design services, patenting and licensing services;
- Provide grants and venture financing for new and emerging projects;
- Administer the Invention Development Assistance Fund (IDAF) for the initial experiments and prototype development and other invention development-related activities;
- Assist technology generators, inventors, and researchers avail of the laboratories and other facilities of the Research and Development Institutes including DOST Regional Offices and other government agencies, offices, and instrumentalities; and
- Accredit and recognize inventors' associations throughout their activities.

ABOUT IDD

INVENTION DEVELOPMENT DIVISION (IDD)

IDD is mainly responsible for providing assistance to Filipino inventors by upholding the Intellectual property system as well as the business development of inventions and technologies.

FUNCTIONAL OBJECTIVES

1. To provide quality service to Filipino inventors in their application for Intellectual Property (IP) protection that meets Intellectual Property Office of the Philippines (IPOPHL) requirements to at least 85% of annual target.

2. To facilitate provision of technical and financial assistance in the development and pilot production of inventions to at least 85 % of annual target.

3. To provide training on creativity and inventiveness to at least 85% of annual target.

4. To accredit inventor's organization that meets prescribed criteria to at least 85% of annual target.

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