

## PHYTOCOSMETIC COMPANIES AS AN ALTERNATIVE FOR LOCAL DEVELOPMENT IN THE AMAZON

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### ABSTRACT

*The Amazon biodiversity has been a constant target of discussions, mainly by governments and scientists to confer the condition of being the basis of the regional economy in the near future. For this to occur it is necessary, in fact, much more than scientific research, but its applicability. This, by itself, is not an easy activity because demand resources, requires the establishment of public policies, infrastructure, human resources, financing, among other factors. This article aims to identify and characterize companies operating in phytocosmetic branch in the state of Amazonas. Therefore, it was used as a methodology to scientific exploration, technological and market companies operating in the cosmetics manufacturing segment in the state. 15 companies were identified that produce phytocosmetic, perfumery and personal hygiene. As address the identified companies, it was found that 57% of based in Manaus have possessed or physical support from the state or local incubators.*

**Keywords:** *Phytocosmetics; Business; Amazon; Cosmetics*

### 1. INTRODUCTION

The Amazonas state is Brazil's largest federal unit in area, with more than 1.570.000km<sup>2</sup> and preserved area greater than 70%. It holds great biodiversity and natural resources. Its economy has guided by the Industrial Pole of Manaus (PIM) and extraction of natural resources. These economic models have been heavily criticized, first, by the instability of tax incentives offered to companies installed in PIM, second, for not having provided the balanced development of all municipalities, third, because the technologies used in PIM are not developed in the State, given that, the companies' research centers are usually in other countries and, fourth, the model has not taken the local biodiversity for sustainable development.

The appeal to the use of Amazonas state natural resources, and Amazon in general, as a source of local development has intensified and the alternative has been to encourage the production and marketing of non timber forest products, mainly supported by the appeal of green and solidarity market. With this fact, it is notable the significantly growth in domestic and international market demand for natural products, organic foods, herbal medicines and phytocosmetics.

It is observed, despite great potential of the existing biodiversity in the Amazon rainforest and several researches carried out by research centers installed in the State, the basis of local economy is not based in the bio-industry, or industries that have in their proceeds basic raw material from local biodiversity.

The Amazon biodiversity is an important funding source (potential and actual), with strategic value, social, environmental and, of course, economic. In this context, science, technology and innovation become indispensable tools to transform, effectively, the potential of biodiversity, thus consolidating a development model based on the natural heritage of the State.

The phytocosmetic production or green cosmetics, that is one of the activities of bio-industries, whose relevant legislation does not prevent its development, such as in herbal medicines, has grown significantly in Brazil and the world; however, even with the good performance of the country in the personal care sector, perfumes and cosmetics, the segment in the Amazon still represents a small percentage of the national scene (SANTOS, 2011). Between the years 2002 and 2010 were duly established in Brazil 639 companies linked to cosmetics industry, and only 3 in the Amazon. The Gross Domestic Product of the country between the years 1999 and 2008 grew by around 38.6%, while the cosmetics market grew 151.5% (ABIHPEC, 2012).

Against the cosmetics market increase, products for perfumes and toiletries in recent years, the instability of the Free Zone model and the potential that the Amazon has for the production of cosmetics with ingredients coming from local biodiversity, it is essential to identify and meet representatives companies of phytocosmetic segment installed in the State, relating similar and differing characteristics to later, find mechanisms to stimulate the sector in the state, promoting local development.

Given the scarcity of scientific studies on this subject in the Amazonas state, this work aims to contribute to the theoretical basis, promoting the identification of companies in the follow-up and subsequently, serve as a basis to encourage discussion and understanding of relationship between phytocosmetic area corporate in order to deepen the relationships that contribute to the establishment of these companies in the market.

## 2. PHYTOCOSMETIC

Phytocosmetics can be defined as the cosmetic that contains natural ingredients of plant origin such as an extract, essential oil or oil, whose action sets the product activity (ISAAC et al, 2008) to the detriment of synthetic one (ILHA et al, 2008). It is called so, because they bring in their formulation large amounts of vegetable ingredients (MARÇAL, 2012).

According to ANVISA (2000), cosmetics are toiletries and perfumes, constituted of natural or synthetic substances, for external use on various parts of the human body, skin, hair system, nails, lips, external genital organs, teeth and mucous membranes oral cavity, it has the unique and the main purpose to cleaning them, perfuming them, changing their appearance and or correcting body odors and or protect or keep them in good condition.

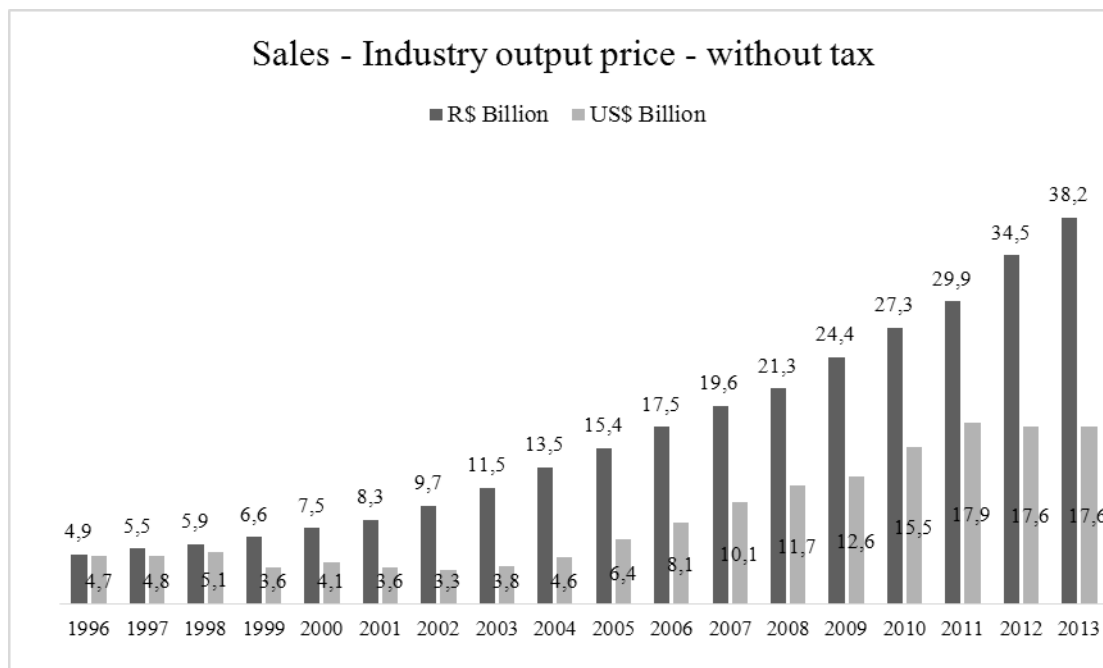
The definition of natural ingredient is ambiguous and uncertain. Isaac et al (2008) has two streams: a more restrictive natural setting as "the substance from a renewable plant source and is not derived or otherwise chemically modified form or changed." The other stream, broader than just covering almost all raw materials, "considers natural substance derived from natural or synthetic origin."

In general, the demand for natural ingredients for cosmetics are increasing. More and more natural products have been demanded by the consumer market that is attracted by the functional benefits and a growing environmental appeal. Thus, phytocosmetic are inserted within the market of toiletries, perfumes and cosmetics that has grown significantly in the world market.

There are numerous raw materials derived from the Brazilian biodiversity in the production of cosmetics: oils, fats and waxes, resins essential oils, plant extracts and dyes, currently growing the use of products such as oil andiroba, copaiba, annatto and buriti (Zanatta, 2008), cajuru, love-grown, cupuaçu, murumuru, tucumã, camu-camu, jaborandi, guarana, nuts and other medicinal plants. Besides what was mentioned, Herculano (2013) also identified açaí, white pitch, mulateiro, priproca, cat's claw, sara all, rosewood, and pracaxi ucuuba as common species used in the production of cosmetics. It notes that are an amplitude of possibilities of plant species in the cosmetic bioindustry usage.

### 2.1 Scenario of Phytocosmetics in Brazil

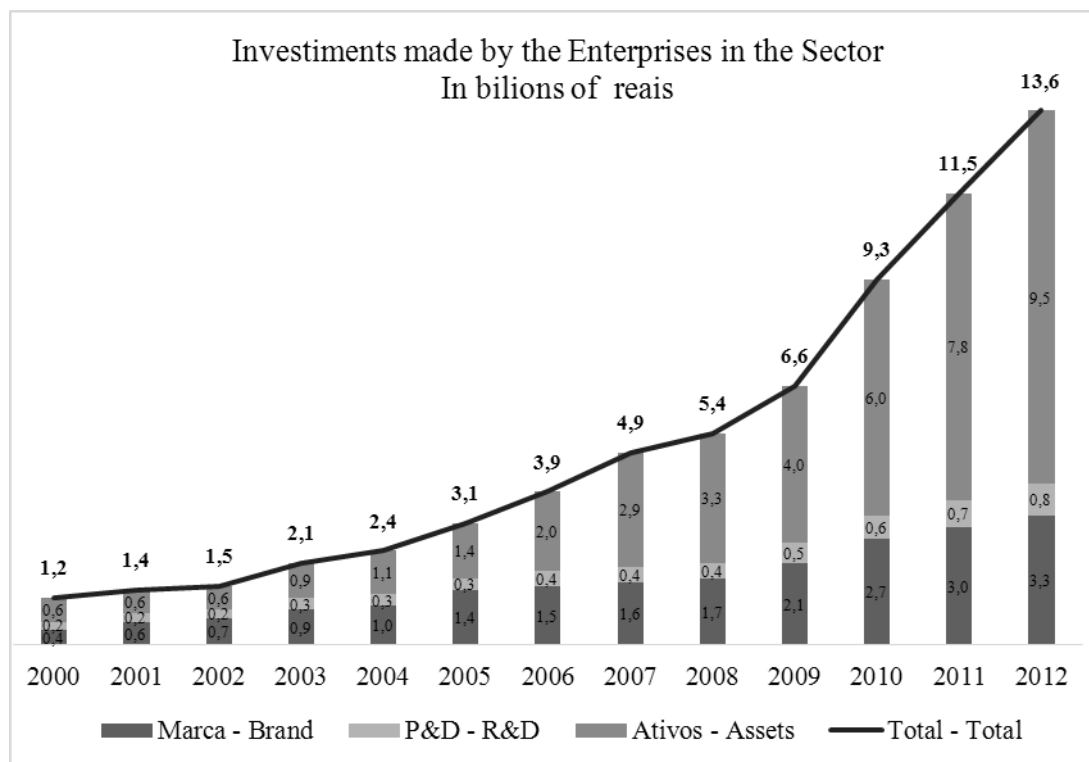
According to ABIHPEC (2014), the Brazilian Industry of toiletries, perfumes and cosmetics had an average growth of 10% over the past 18 years (Figure 1), going from net income on sales of R\$ 4.9 billion in 1996 to R\$ 38 billion in 2013. The sector accounted for 5.615 million job opportunities, an increase of 312.9% since 1994, averaging 9.9% per year.



**Figure 1.** Sales - Output price toiletries industry, perfumery and cosmetics (ABIHPEC, 2014).

This growth can be explained by the significant increase in the participation of Brazilian women in the labor market, constant launches of new products to attend growing consumer needs; increasing life expectancy, quality, well-being and bodily health (SEBRAE 2008; Abhipec, 2012; Abhipec, 2014).

The cosmetics market scenario has changed significantly in recent years around the world. In addition to the user profile change, the significant increase is observed in investment in this area as shown in figure 2.



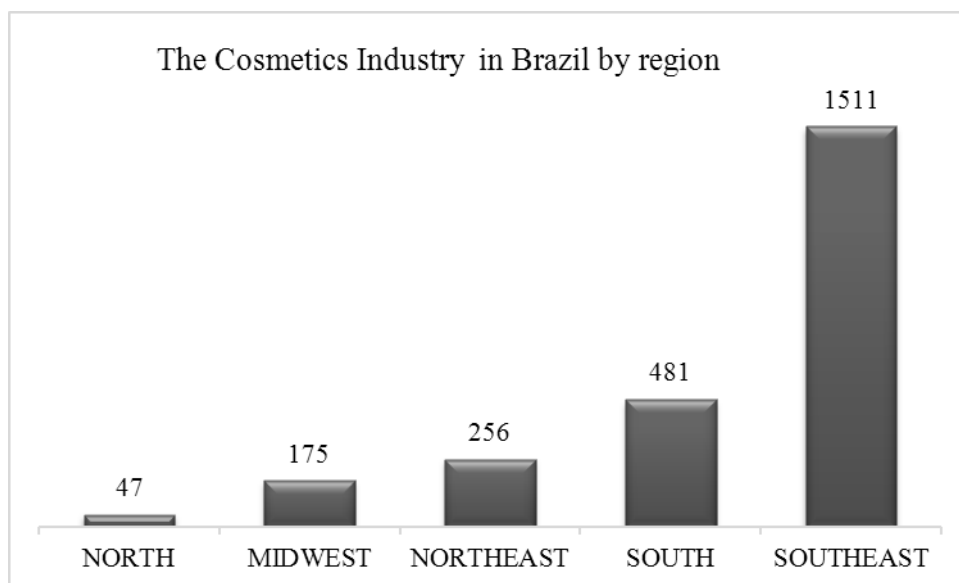
**Figure 2.** Sector Companies Investments (ABHIPEC, 2012).

Seems like the largest investments were made on brands, in search of sales channels and market positioning, followed by investments in assets and, finally, in research and development (R & D).

"This panorama shows most companies and other members of the productive sector, invest little in the development of proprietary technologies and innovation, translated by expressionless spending on R & D" (MIGUEL, 2007) if compared with investments in assets and brand seeking channels more practical sale to the consumer and friendlier to the environment business (BENSON and FALK, 2008).

Although Brazil is the third largest perfumery producer and personal care sector of cosmetics, it can be seen in Figure 3 that facilities in these industries do not occur homogeneously in the country.

Analysing Figure 3, becomes apparent that the Southeast and South are mainly responsible for domestic production of sectors under review. Faced with an unbalanced industrial policy, where some locations are extremely industrialized over other regions of the country, which for Miguel (2007), is that "process of modernization and contemporary public policy did not break with the standard frontier economy, which reached its peak with the national integration program and other development policies. "



**Figure 1.** The Cosmetics Industry in Brazil by region (ABHIPEC, 2014).

Due to the fact that phytocosmetic are cosmetics that have in their natural active composition of plant origin, no specific data marketing, being inserted into the personal care industry data, perfumery and cosmetics, which makes it impossible to quantify the percentage of the market that is directly related with phytocosmetic companies and bioindustry or even cosmetics.

The absence of statistical data on amount of natural products in cosmetic compositions is unable to adequately measure the importance of these products in cosmetics industry and the country's economy, putting many species and subproducts in the category of invisible products and it is a limitation in production systems knowledge and certain raw materials, essential for sustainable business. A successful sustainable business involves transactions or ethnic exchanges, products, services, money, benefiting everyone involved (company, customer, community) (BENSON and FALK, 2008).

Among the products with the greatest economic potential for the phytocosmetic industry, stand out the native fruits, vegetable oils, essential oils and natural dyes, resins and waxes. According to Lubbe and Verpoorte (2011), the US are responsible for 24% of the production of essential oils in the world in terms of volume, China produces 20% and Brazil 8%. Turkey, Indonesia, Morocco, Hungary, Bulgaria, India, France, Italy, Spain and Egypt, together, produce 43%. The other countries around the world produce 5% or less of essential oils, in terms of volume.

European market is interested in many essential oils, most of tropical origin. However, the lack of supporting data safety, traceability, technical crops, production and quality processes, has prevented developing countries to provide raw materials for this kind of market, which is growing significantly (LUBBE E VERPOORTE, 2011).

### 3. METHODOLOGY

The survey was conducted by using scientific collection data in technological and market bases. First of all, the data bases were selected, emphasizing those that are present in the Portal de Periódicos da Coordenação em Aperfeiçoamento de Nível Superior (CAPES).

Scientific articles were selected from the following data bases: 1. SciELO (Scientific Electronic Library Online) developed to attend the needs of scientific communication in developing countries, particularly in Latin America and the Caribbean; 2 - Web of Science, multidisciplinary coverage, with approximately 9,300 most prestigious research journals with high impact in the world and 3 - Scopus, a new navigation tool that includes the largest multidisciplinary global collection of abstracts, references and literature indexes scientific, technical and medical.

Digital scientific library data bases of theses and dissertations University based in Brazil were consulted, such as the University of São Paulo, University of Campinas, Federal University of Amazonas, Federal University of Rio Grande do Sul and other available data bases in the portal journals of Portal de Periódicos da Coordenação em Aperfeiçoamento de Nível Superior (CAPES).

For patent documents, free bases were used, such as: 1-Instituto Nacional de Propriedade Industrial (INPI), Brazil's patent bank that contains approximately 24 million documents; 2 - Espacenet, European patent base, which provides to the user, high quality patents data online from over 80 different countries; and, just a payed base 3 - Derwent, the indexed data base at CAPES, containing over 20 million patent families, covering more than 42.5 million patent documents, enveloped more than 44 authorities patents worldwide.

For market research study, was used Google, which is a multinational company of online search and software based in the US. Google hosts and develops a number of services and products based on the internet.

Words like cosmetics, phytocosmetics and natural cosmetics were selected as keywords for the search. In the database, technological consult was carried out by means of advanced search, which was selected as patent priority country Brazil and International Patent Classification (IPC) A61K, which is part of cosmetics. The survey conducted by using Google used the expression company+ cosmetic+Amazon.

Later, with the data already collected, research was filtered, organized and stored in order to identify the companies that produce them inside of Amazonas State, to right after, a research to be done with the companies names and get more information on them.

With data already treated, it was generated new information for better understanding of knowledge on business, as size, location of facilities, current activity. To this end, further consultations were made in official government websites, companies and when it was possible, a questionnaire was applied.

### 4. RESULTS AND DISCUSSION

There are few studies that deal with the current Amazonas State phytocosmetic scenario. It was found in scientific research bases, some more studies dealing with bioindustry subject, specifically related studies to the medicinal plants's chain, herbal and phytocosmetic combined (Lasmar, 2005; Pepper, 2005; Noronha 2009; Frickmann et al 2011;. SANTOS 2011). Analysing scientific basis, it was possible to identify 15 phytocosmetic area.companies based in Amazonas State.

In research in technological bases, using the Classificação Internacional de Patentes (CIP)'A61K' and filtering the term Patents Priority 'Brazil' no records were found or requests for patents of cosmetics companies based in Amazonas State. This result demonstrates local companies have invested little in research and development or who have not sought their intellectual property protection mechanisms through patents.

Twelve other firms that were not identified in the scientific bases, were identified in the survey conducted in the Google search engine. The search using the expression: company + cosmetic+Amazon, revealed about 690,000 links. Through filters and queries to links provided by Google as sites such as SUFRAMA (Superintendencia da Zona Franca de Manaus), SEFAZ (Secretaria da Fazenda do Estado do Amazonas), FIEAM (Federação das Indústrias do Estado do Amazonas) were only selected companies / institutions with production within the state.

The result demonstrates how the sale and of cosmetics market distribution has behaved in electronic commerce.

It was identified, as an initial prospecting, a total of 27 companies that work with phytocosmetic production in Amazonas State (Table 1). With help of the Receita Federal do Brasil site, it was found 88.89% of identified companies have active registration, one of them is inactive and other two companies have not identified their registrations.

**Table 1** – Possible phytocosmetics companies located in the State of Amazonas

Seq	Enterprise	A	B	C
1	Agrorisa	1,4		
2	AMARU - Associação dos Moradores Agroextrativistas da Reserva de Desenvolvimento Sustentavel Uacari	3		
3	Amazon Cosméticos Ltda - Magama	1,2,4		
4	Amazon Ervas	1,3,4		x
5	Amazon Green	5		x
6	Amazonbio Indústria e Comércio Ltda			x
7	Anna Morena Fitocosméticos da Amazônia			x
8	Aroma Tropical da Amazônia	5		
9	Aroma Ativo	5		x
10	AVIVE	3		
11	Beleza da Floresta			x
12	Bella Cabocla Produtos Naturais Da Amazônia			x
13	Benchimol irmão & Cia Ltda			x
14	Bio essencia - Anauá			x
15	Biona do Brasil - óleos essenciais da Amazônia	3		
16	Cheiro amazonico			x
17	Consorcio dos produtores Sateré Mawe	3		
18	Crodamazon Ltda	1		x
19	Ecoamazon laboratorio botanico			x
20	Emporio & aromas da Amazônia			x
21	Gotas da Amazônia	4		x
22	Hardman ind. e Comércio da Amazônia			x
23	Harmonia Nativa	5		x
24	N. L. Mayer – Amazon Biocare			x
25	Natus - Esponjas Vegetais da Amazônia			x
26	Pharmakos d' Amazonia S.A	1,2,3, 4,5		x
27	Pronatus do Amazonas	1,2, 3,4,5		x

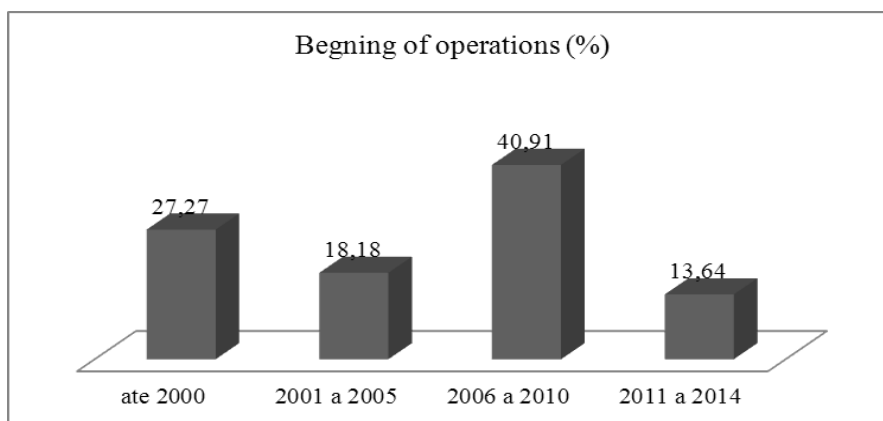
Legend:

A – Scientific databases; B – Technological databases; C – Marketing – Google base; 1 – Lasmar 2005; 2 – Pimenta 2005; 3 - Miguel 2007; 4 – Santos 2011; 5 – Herculano 2013; X – company name referenced on the site.

Of the 25 active companies, two have engaged in manufacture of cosmetics, perfumery and personal hygiene.

Among the active companies that have as main or secondary activity the manufacture of cosmetics, perfumery and personal care (Figure 4) 27.27% started their activities by the year 2000 and the first cadastral registration was in 1966, as a result of the change of social and economic profile of the region that only occurs with the installation of the Manaus Free Trade Zone in the 1960s. It was noted as Chart 1 that 18.18% of the companies had their formal activities initiated between years 2001 to 2005; 40.91% from 2006 to 2010 and 13.64% from 2011 to 2014. As the cadastral address provided by Receita Federal do Brasil, 04 companies - associations - are installed in the countryside of the state and the others in Manaus.

It appears that approximately 73% of registered companies to work with manufacture of cosmetics, perfumery and personal hygiene had their formal activities started from the year 2001, parallel to the beginning of a series of political discussions and strategies that alounded to the Amazon region, the enstallation of industries that if used local biodiversity (bio-industry), mainly represented by the phyto industry, herbal and phytocosmetic.



**Figure 4.** Start year of possible companies phytocosmetic operations.

From the year 2001, as agents like Fundação Centro de Análise, Pesquisa e Inovação Tecnológica (FUCAPI), Ministério Ciência e Tecnologia (MCT) and the Amazonas State Government (through the Planning Department) and other institutions began discussions for the establishment of Legal Amazon's Technology Platforms, which has contributed to the treatment of major problems to stimulate the local Bioindustria.

To the legal aspect, 15% are associations, 26% are individual entrepreneurs, 44% are limited business partnerships and 4% were not possible to define. This information gives us an idea of the types of taxes and revenues that these companies are subjected.

Analysing the addresses of the identified firms at he beginning of survey, 23 companies are located in Manaus, 05 are or have been in the Distrito Industrial das Micro e Pequenas Empresas (DIMPE, 06 in Centro de Incubação e Desenvolvimento Empresarial (CIDE), 1 company in Universidade Luterana do Brasil (ULBRAtch) incubator and the orther one, in the FUCAPI. Incubator

DIMPE, a Amazonas State project in partnership with SUFRAMA and a network of agencies related to the microenterprise sector, along with the incubators are responsible for 57% of physical support of phytocosmetic companies in Manaus, may be recognized as a result of effort of several institutions to promote local development.

Within the 27 companies initially prospected, 4 are associations and its core activity has been the inputs production for the fabrication of a bioindustry chain, other 2 have the legal nature for the manufacture of cosmetics, but at the moment its activities has been in the beneficiation process of oils and extracts; 2 are inactive or dead. One of the companies changed its field of activity, not acting more in the production of cosmetics. It could not to contact with 3 of the identified companies.

Local businesses that have confirmed the production of cosmetics, perfumes or toiletries with Amazon Biodiversity ingredients are listed in Table 2.

**Table 2-**Enterprises of phytocosmetic located in Amazonas State

Seq	Enterprise
1	Amazon Ervas
2	Amazon Green
3	Anna Morena Fitocosmeticos da Amazônia
4	Aroma Ativo
5	Beleza da Floresta
6	Bella Cabocla Produtos Naturais Da Amazônia
7	Bio essencia - Anauá
8	Cheiro Amazônico
9	Emporio & Aromas da Amazônia
10	Gotas da Amazônia
11	Harmonia Nativa
12	N. L. Mayer – Amazon Biocare
13	Natus - Esponjas Vegetais da Amazônia
14	Pharmakos d' Amazonia
15	Pronatus do Amazonas

During the gathering of information, it was found that Natura Cosmetics company has research and development office in Manaus, however its manufacturing facilities are not located in Amazonas State.

## 5. FINAL REMARKS

Few studies that are related to the current scenario of phytocosmetic in Amazonas State have been identified. The subject is related in general, in studies linked to bioindustry, more specifically linked to the medicinal plants chain, herbal and phytocosmetic combined.

It was not identified in the technological bases any cosmetic patent registration requested by the companies located in the state of Amazonas.

Through prospecting survey on scientific grounds, we identified studies mentioning 15 different companies that work in the cosmetics production, perfumes and toilet preparations in the state. Prospecting web allowed the identification of other 12 companies in the segment. In total 27 companies identified, it can be confirmed that 15 are producing cosmetics, perfumes or toiletries with inputs of Amazonian biodiversity.

According to the date of the identified undertakings, it was observed that 73% of them started operations after the year 2000, when it occurred an effort to promote the local Bioindustry by the State. Still as registration data, it was possible to see that the companies based in the capital, 57% have some physical support from the state or local incubators.

Despite the importance of phytocosmetic companies for the State development have been few large companies that have settled to produce phytocosmetic in the Amazon.

Compared the number of 27 companies initially identified with this kind of exploration, with more than 450 companies located in the Industrial Pole of Manaus, there is confirmation that the manufacturers of cosmetics, perfumes and toiletries with Amazon biodiversity ingredients yet is small.

Numerous reasons can be inhibiting or constraining the development and installation of these companies in the region such as technical standards, relevant legislation to the market, lack of partners, financing, research and development.

For the phytocosmetic industry become a sustainable alternative to the economic model applied to the Northern Region, further efforts are needed to optimize the relationship in the research, teaching, technology development, supply chain and the relevant legislation between the agents involved in chain.

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