

# ***New IPC Codes For Identification of Patent Applications Related to Traditional Knowledge (TK)***

February 2018



- *Traditional Knowledge*
- *TK databases by BRICS*
- *TK related Patent Documents*

# *Traditional knowledge (TK)*

Traditional knowledge (TK) is knowledge which has been developed within an indigenous community and has been assimilated into the cultural make-up or essential character of that community. It encompasses knowledge, know-how, skills and practices that are developed, sustained and passed on from generation to generation within a community, often forming part of its cultural or spiritual identity, according to the World Intellectual Property Organization (WIPO). These include:

- (a) knowledge of a scientific or technical nature;
- (b) knowledge of natural resources; and
- (c) indigenous cultural expressions.

WIPO website of TK can be found at <<http://www.wipo.int/tk/en/tk/>>

# *Legal protect of TK*

- International protection through treaties and conventions;
- National protection through national legislations controlling access to genetic material enacted in various countries, and national intellectual property legislations;
- Local protection through private contractual measures.

WIPO website of TK can be found at <<http://www.wipo.int/tk/en/tk/>>

# *Databases about TK - BRICS*

- **India** - Traditional Knowledge Digital Library – TKDL –detailed classification called Traditional Knowledge Resource Classification – TKRC – with more than 2.000 groups.
- **China** - Traditional Chinese Medicine Database System : Traditional Chinese Medical Literature Analysis and Retrieval System (TCMLARS) and Traditional Chinese Drug Database (TCDBASE), but mostly in Chinese.

# *Data bases about TK - BRICs*

- **Brazil** - a project called Biota-FAPESP program regarding knowledge and sustainable use of Brazilian biodiversity is under development.
- **South Africa** - developing a database for the identification and record of TK and Traditional Biological Resources (TBR)
  - developed a National Recordal System (NRS) defensive and positive mechanism of protection of IK.
  - developed a National Indigenous Knowledge Management System (NIKMAS), which is a semantic digital repository, which, among others, manage prior art declaration
- Russia has no study in this area yet.

# ***TK and Patent Application***

- traditional knowledge has grown tremendously - biotechnology, particularly the pharmaceutical, phytomedicinal, nutraceutical, and herbal sectors.
  - $\frac{3}{4}$  Three-fourths of the biologically active plant-derived compounds currently in use have been discovered through follow-up research to verify authenticity of data derived from traditional sources.
- More recent research continues to validate the importance of an ethnobotanically targeted approach to the initial discovery of therapeutics.

<[http://www.wipo.int/edocs/mdocs/tk/en/wipo\\_tkdl\\_del\\_11/wipo\\_tkdl\\_del\\_11\\_ref\\_t3\\_1.pdf](http://www.wipo.int/edocs/mdocs/tk/en/wipo_tkdl_del_11/wipo_tkdl_del_11_ref_t3_1.pdf)>

# *TK and Patent Application*

- This knowledge is valuable - to those who depend on it in their daily lives, but also to modern industry and agriculture.
- Many widely used products, such as plant-based medicines and cosmetics, are derived from traditional knowledge.
- Other valuable products based on traditional knowledge include agricultural and non-wood forest products as well as handicraft.
- known examples of patent applications on traditional medicine, ex. using medicinal plants as base for development in medical field.



# ***New IPC codes to identify TK related patent documents***

- 1. Patent documents related to traditional medicine**
- 2. Patent documents related to traditional agriculture**

# Background

- **February 2001 - The first time the topic TK was presented for the IPC community**
  - task force was created proposing to expand four IPC groups (A61K35/78, A61K35/80, A61K35/82 and A61K35/84), (project [C425](#) “Traditional Medicines”)
  - Creation of the main group A61K36/00 with 204 subgroups, in force since IPC 2006.01, titled as:
    - **A61K36/00 Medicinal preparations of undetermined constitution containing material from algae, lichens, fungi or plants, or derivatives thereof, e.g. traditional herbal medicines**
- The Committee of Experts in its 34<sup>th</sup> Session and 35<sup>th</sup> Session discussed in deep this subject; comments and more detailed information can be found in documents [IPC/CE/34/8](#) and [IPC/CE/35/7](#).

# Background

In 2011, during the International Conference on the Utilization of the Traditional Knowledge Digital Library (TKDL) as a Model for Protection of Traditional Knowledge, the coordinator of the TKDL Unit exposed that it would be meaningful for the Committee of Experts IPC Union to consider enhancing from the current 204 subgroups to 2.600 subgroups for medicinal plants used in Indian TM systems.

We could not find in details which were those 2.600 groups suggested; if CGPDTM could provide us this information it could be fruitful for this project.

Nevertheless, since IPC 2006.01 nothing was added to the classification scheme related to this subject matter of traditional knowledge.

Project C425 can be found at <<https://www3.wipo.int/ipc-ief/public/ipc/en/project/1144/C425>>

IPC/CE/34/8 Report, regarding development of classification tools for TK, can be found at

<[http://www.wipo.int/meetings/en/doc\\_details.jsp?doc\\_id=21312](http://www.wipo.int/meetings/en/doc_details.jsp?doc_id=21312)>

IPC/CE/35/7 Report, regarding classification tools relating to TK and biodiversity, can be found at

<[http://www.wipo.int/meetings/en/doc\\_details.jsp?doc\\_id=32445](http://www.wipo.int/meetings/en/doc_details.jsp?doc_id=32445)>

# Patent documents related to traditional medicine

Number of patent documents classified in A61K36/00 or its subgroups each BRICS Office

A61K36	BR	RU	IN	CN	ZA
BR	1.702	312	14	829	188
RU	310	5.016	17	588	95
IN	14	16	173	59	26
CN	813	581	59	186.596	238
ZA	185	94	25	240	499

The research was done in 24 March 2017.

This is the minimum number of documents in TK in each country, but it is clear that there is more than that.

# *Patent documents related to traditional medicine*

## **Example of Patent Documents Related to TK with Applications in the BRICS Countries**

1) **PN:** BR0116589 / RU2310466 / CN1520307 / ZA200305603

**Title:** Herbal composition for angina pectoris, method to prepare same and uses thereof

**IPC:** A61K 36/185, A61K 36/537, A61K 36/258

**CPC:** A61K36/537, A61K36/258

# *Patent documents related to traditional medicine*

- Conclusions:
  - Patents related to TK in every BRICS Offices
  - The main group A61K36/00 is the most evident group containing documents related to TK, but there are other documents spread all through the IPC scheme in general.
  - There might be documents related to TK which are not classified in A61K36/00.

# Patent documents related to TK at INPI/BRAZIL

In Brazil the applicant should indicate when the genetic heritage was accessed while developing an invention, presenting the authorization number of the access – 95 applications

Combining the main group A61K36/00 with any A61P symbol, the result would be most likely patent documents related to traditional medicine.

It should be noted, however, that subclass A61P is not present in the CPC scheme, i.e. in CPC A61P does not exist

Subclass	Repetitions
A01N	4
A01P	4
A61K	41
A61P	32
A61Q	4
C07C	1
C07D	2
C08K	1
C11B	2
C12N	1
C12P	2
F26B	1
Total	95

# *Patent documents related to traditional agriculture*

For traditional agriculture, we expect permaculture or cultivation in to be used. As Russia defined, currently, there exist the following definitions of permaculture:

- a system for organization of ecosystems consisting of edible plants;
- an approach to engineering of environment and a system for agriculture based on correlations between natural ecosystems.
- in the present study we split agriculture into four general areas: **soil working, planting, cultivation and harvesting.**



# Patent documents related to traditional agriculture

	Examples of TK	IPC	Coments
Soil working, planting, cultivation and harvesting	. Ex. polyculture (when multiple crops coexist in the same space)	<ul style="list-style-type: none"> <li>- Hand tools used in soil working (A01B1/00)</li> <li>-methods for working the soil (A01B79/00)</li> </ul>	Difficult to separate the TK documents
Planting		A01C	Although machines are, in principle, not used in traditional agriculture, this subclass is broad and documents related to TK might be spread around.

## *Patent documents related to traditional agriculture*

	IPC	Coments
Cultivation	A01G2/00, A01G7/00, A01G7/00 and A01G 23/00 (IPC 2018).	horticulture and forestry are main subjects

. In the year of 2017, project C486 related to A01G1/00 was discussed in the IPC community where permaculture was cited, but at the end not adopted. It was the first time this subject matter attempted to be a group but it was not approved.

# *Patent documents related to traditional agriculture*

By **cultivation** we also mean how to maintain the culture during lifetime, therefore we would like to include more groups in this area.

Catching, trapping or scaring of animals is covered by A01M, e.g. for weed control, could contain some documents related to TK.

Biocides, pest repellants or attractants or plant growth regulators are covered by A01N65/00; for example, neem (azadirachta indica) and Tabaco are used in traditional agriculture.

We believe that this is the easiest subject matter that documents related to TK could be found.

# *Patent documents related to traditional agriculture*

**Harvesting** related to traditional agriculture is included in A01D1/00 – A01D9/00, for hand implements, and might also have something in A01D13/00, due to potato cultivation being a very traditional cultivation type.

In this area we also include threshing covered by A01F1/00 – A01F5/00 and A01F13/00, for hand implements, and A01F25/00, since storing is unique in traditional agriculture.

# *IPC related Traditional Knowledge*

- Traditional knowledge could have a subclass in IPC by its own.
  - preparations used in TK could be used for medicine or agriculture.
  - propose a general scheme that can be classified for medicine or agriculture, being easier and more efficient for search in TK.
  - A deeper hierarchy could emphasize raw materials used therefore.

<b>A61T</b>	<b>Medicinal preparations provided with traditional knowledge; Agriculture methods, processes or products provided with traditional knowledge</b> <b>Note:</b> <b>1. Preparations could be used either with medicine or agriculture purposes</b>
<b>A61T10/00</b>	Preparations containing material from algae
<b>A61T15/00</b>	Preparations containing material from fungi, e.g. yeasts
<b>A61T20/00</b>	Preparations containing material from lichens
<b>A61T25/00</b>	Preparations containing material from plants
<b>A61T30/00</b>	Preparations containing material of animal origin
<b>A61T35/00</b>	Preparations containing material not covered by A61T10/00-A61T50/00, e.g. protozoa or bacteria
<b>A61T40/00</b>	Preparations of undetermined constitution
<b>A61T45/00</b>	Preparations of determined constitution, e.g. terpenoids, flavonoids, steroids and alkaloids
<b>A61T50/00</b>	Agriculture methods or processes, e.g. permaculture and cultivation in association; Products therefore

We expect that no matter a document is related to medical preparation or agriculture preparation against unwanted organism, this document might receive one symbol from A61T10/00-A61T35/00 and one symbol from A61T40/00-A61T45/00 for a complete description of the subject matter. We foresee subgroups in five of the main-groups, A61T10/00, A61T15/00, A61T25/00, A61T45/00 and A61T50/00.

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