

STN®

The Art of ECLA

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Agenda

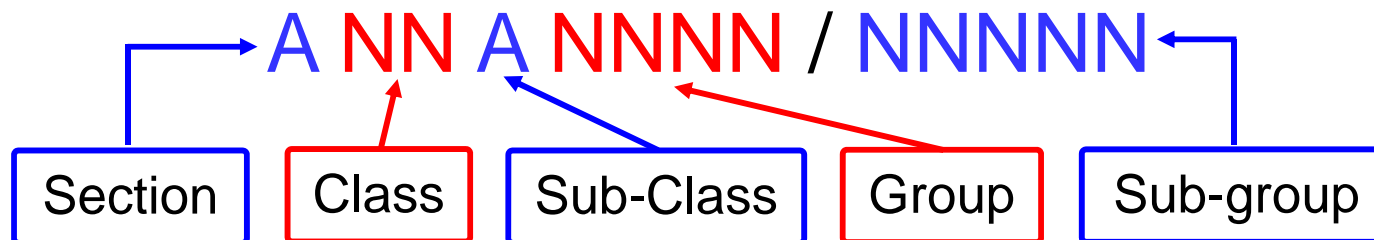
- Description of ECLA
 - Comparison with IPC
 - ECLA coverage
 - ECLA files and tools
- Case study for using ECLA

European Classification (ECLA) is assigned by the European Patent Office (EPO)

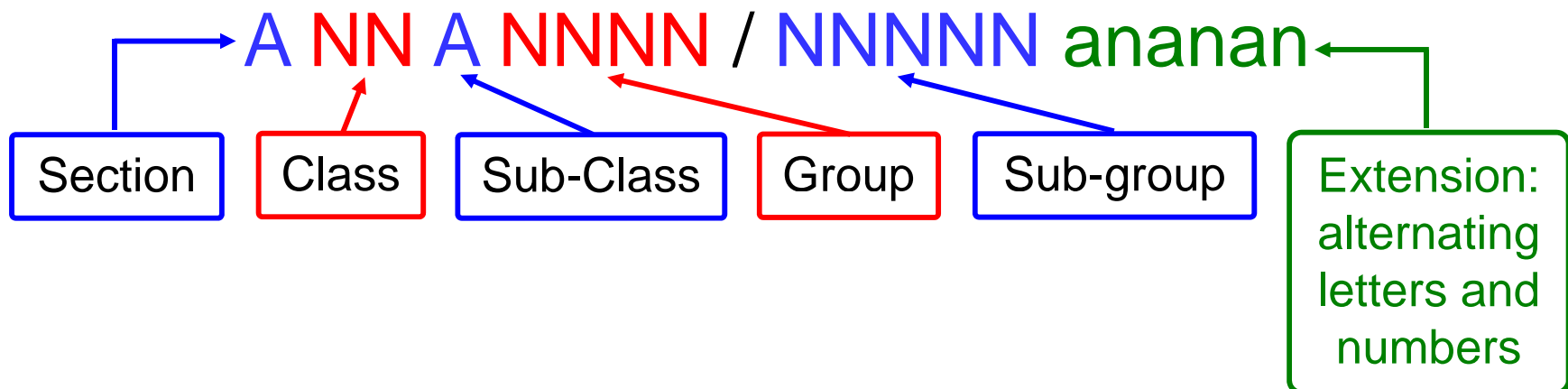
- Based heavily on the 4th edition of IPC (IPC4)
 - Approximately twice as large as IPC8-Advanced
- Maintained by EPO and continuously updated
 - New classifications added
 - Old documents reclassified
 - New documents classified
- Electronic system only
 - ECLA are not printed on published documents

Structure of IPC and ECLA codes

- International Patent Classification (IPC)



- European Classification (ECLA)



ECLA and IPC are hierarchical and non-expressive

A61K 47/00 Medicinal preparations characterised by the non-active ingredients used, e.g. carriers, inert additives **IPC**

[2] Medicinal preparations [N: i.e. non-oral liquid or semi-liquid forms] characterised by the non-active ingredients used, e.g. carriers, inert additives, [N: e.g. penetration enhancers, solvents, stabilisers][C0307]

show notes

Expand groups Copy to searchform: Copy Clear

[N: Mixtures of compounds according to more than two of the following groups A61K47/02 to A61K47/46]

- Inorganic compounds **A61K47/00R**
- Organic compounds, [N: e.g. vaseline, petrolatum, synthetic polyolefins] [C9803]
 - containing oxygen, [N: e.g. ethers, acetals, ketones, quinones, aldehydes, peroxides] [C9803] **A61K47/02**
 - Alcohols; Phenols; Salts thereof, [N: e.g. polyethelers (sugar alcohols, derivatives thereof **A61K47/26**; copolyglycol and/or Pluronic **A61K47/34**)] [C0307] **A61K47/06**
 - Carboxylic acids; Salts or anhydrides thereof **A61K47/08**
 - Esters of carboxylic acids **A61K47/10**
 - containing nitrogen, [N: e.g. nitro-, nitroso-, azo-compounds, nitriles, cyanates] [C9803] **A61K47/12**
 - Amines; Quaternary ammonium compounds, [N: e.g. amides, ureas, amine-oxides, hydroxylamines, amino-alcohols, urethanes, Tetronics] [C9803] **A61K47/14**
 - [N: Amino-acids, aminosulphonic acids] [C9803] **A61K47/16**
 - [N: Quaternary ammonium compounds] [C9503] **A61K47/18**
 - A61K47/18B**
 - A61K47/18D**
 - A61K47/20**

See: <http://v3.espacenet.com/eclasrch>

Note the additional subdivisions in ECLA that are not in IPC.

Indexing philosophy evolved for both ECLA and IPC

- IPC
 - Pre-reform IPC focused primarily on the claimed invention that was indicated by the “Main IPC”
 - Might also index non-claimed concepts
 - Reformed IPC has moved away from “claims-only” to become more like ECLA
- ECLA
 - All new inventive concepts, whether claimed or not
 - Might also index additional information
 - Originally indexed via ECLA
 - Moving toward using ICOs for this information

“In Computer Only” (ICO) codes are based on ECLA and are also applied by the EPO

- There are two types of ICO
 - Identical to ECLA except for the first letter
 - **A B C D E F G H** → **K L M N P R S T**
 - Captures “additional information”
 - Additional subdivisions of ECLA
 - Captures emerging technology
 - Often will be added to ECLA 2-3 revision cycles later

Note: A comprehensive PDF file of ICO definitions is available via a link in the INPA [FAMDB](#) file entry banner.

Advantages of ECLA over IPC

- More consistently applied
 - EPO examiners for that technology area ONLY
 - IPC applied by variety of people/patent offices, including publishing national patent office, the PCT ISA, the International Bureau, and the applicant
- More stringent training
 - EPO examiners are required to have two years of training in ECLA before applying a single code
 - For IPC, training varies widely

ECLA is much more specific than IPC in several technology areas

A: Human necessities

C: Chemistry and metallurgy

D: Textiles and paper

E: Fixed constructions

F: Mechanical engineering, lighting, heating,
weapons, blasting

Note: Always take time to compare ECLA and IPC definitions before using them in your patent search.

ECLA: <http://v3.espacenet.com/eclarsearch>

IPC: www.wipo.int/classifications/ipc/ipc8/

Example: extending an IPC search with ECLA (/EPC) to identify additional answers

=> FILE INPAFAMDB

=> S (H01J0037-34?/EPC OR T01J0037-34?/ICO) NOT H01J0037-34/IPC
L1 152 (H01J0037-34?/EPC OR T01J0037:34?/ICO) NOT H01J0037-34/IPC

=> D BRIEF

L1 ANSWER 1 OF 152 INPAFAMDB COPYRIGHT
AN 36876407 INPAFAMDB EDF 20080626 EWF 200826 UPFB 20080626 UWF 200828
TI RF SUBSTRATE BIAS WITH HIGH POWER IMPULSE MAGNETRON SPUTTERING
(HIPIMS).

. . . .

INS KADLEC STANISLAV, CZ; WEICHART JURGEN, LI
- WEICHART JUERGEN, LI

PAS OC OERLIKON BALZERS AG, LI
- WEICHART JUERGEN, LI; KADLEC STANISLAV,

IPCI C23C0014-35 [I,A]; C23C0014-35

EPC **H01J0037-34M2A**

AB (US 20080135401 A1)

An apparatus for generating sputtering of a target to produce a coating on a substrate with a current density on a cathode

. . . .

H01J0037-34 = sputtering cathode discharge tubes.

An ECLA search will often add additional relevant answers to an IPC search.

Agenda

- Description of ECLA
 - Comparison with IPC
 - **ECLA coverage**
 - ECLA files and tools
- Case study for using ECLA

The EPO applies ECLA to a list of resources known as “The PCT Minimum Documentation”

- Patent Co-operation Treaty (PCT) International Search Authorities (ISAs) are required to discover as much of the prior art as possible
- PCT Rule 34.1 defines the *minimum* patent and non-patent document collections which are required in order to meet this requirement
- This collection of resources is typically referred to as the as *The PCT Minimum Documentation*

Learn more about *The PCT Minimum Documentation* at:
www.wipo.int/standards/en/part_04.html

ECLA coverage

Regional system	Begin Date	National Authority	Begin Date
EP	1978 (start)	CH	1920*
WO	1978 (start)	DE	1920*
EA	1996	DE-U	1985
OA	1962	FR	1920*
		GB	1920*
		US	1920*
(* or earliest date)			

Some coverage is also available for BE, NL, LU, AT, AU, and CA.
About 10% of JP cases are covered, but RU and SU are not covered at all.


Timeliness of ECLA

- About 90% of these documents have ECLA assigned within 8 months of publication
- For major countries, generally available within days to a month of publication
- EPs are always the fastest

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- Description of ECLA
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ECLA and ICO are available on STN®

- Databases in which ECLA is included
 - INPAFAMDB / INPADOCDB
 - Derwent World Patents Index® (DWPISM) 
 - CAplusSM
 - RDISCLOSURE
- ECLA and ICO definitions
 - The EPO Look-up tool (for ECLA only):
<http://v3.espacenet.com/eclsrch>
 - PDF files via links in the INPAFAMDB file banner
 - See also **HELP ECLA** and **HELP ICO**

Links to ECLA and ICO definition PDF files are available in the INPAFAMDB file banner

=> FILE INPAFAMDB

FILE 'INPAFAMDB' ENTERED AT 17:50:05 ON 24 AUG 2008

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FILE LAST UPDATED: 21 AUG 2008 <20

21 AUG 2008 <20

MOST RECENT DOCDB WEEK: 200834

FILE COVERS 1836 TO DATE.

The latest version of ECLA and ICO definitions are available for download as fully searchable PDF files.

Updated PDF files in the following links:

http://www.stn-international.de/stndatabases/details/IdT_EPO.zip

http://www.stn-international.de/stndatabases/details/ico_0807.zip

http://www.stn-international.de/stndatabases/details/epc_0807.zip <<

Supplement of all changed ECLA items:

http://www.stn-international.de/stndatabases/details/ecla_0808s.zip

>>> A learning file LINPAFAMDB is available ! <<<

>>> FOR MORE INFORMATION AND FURTHER NEWS ABOUT INPAFAMDB SEE:

<http://www.stn-international.de/stndatabases/details/inpafamdb.html> <<<

=>

Example: search through the ECLA or ICO definition PDF files to find relevant codes

The image shows two windows side-by-side. The left window is titled 'Search' and displays search results for 'CAPSULE in the current PDF document'. The right window is titled 'epc_0807.pdf (SECURED) - Adobe Acrobat Professional' and shows the PDF content with search results highlighted.

Search Window:

Looking For:
CAPSULE in the current PDF document

Results:
1 documents with 98 instances

Searching page 5200 of 5670

Stop

Results:

- C:\D...\epc_0807.pdf
 - g. **microcapsules**, tissues] A61K7/50T2 NT1
 - p# 453 microcapsules; Liposomes; Microsphere**
 - N: **Microcapsules**] [N0209] A61K8/11F NT
 - N: **Nanocapsules**] [N0209] A61K8/14 NT9
 - Bite **capsules**; Baked products; Baits or oth
 - microcapsules** (see ECLA/ICO: A61K9/50;
 - nanocapsules**, nanoparticles of the matrix
 - coating, **microcapsules** (see ECLA/ICO: A

Find a word in the current PDF document

Adobe Acrobat Professional Window:

File Edit View Document Comments Forms Tools Advanced Window Help

Create PDF Combine Files

453 / 5670

66.7%

A61K9

A61K7/50K10	NT11	compounds] [N0007]
A61K7/50K12	NT11	[N: Ternary mixtures of anionic, cationic and non-ionic compounds] [N0007]
A61K7/50K12B	NT12	[N: Ampholytes; Zwitterionic compounds ((see ECLA/ICO: A61K7/50K2) takes precedence)] [N0007]
A61K7/50K14	NT11	[N: Mixtures with anionin, cationic and non-ionic compounds] [N0007]
A61K7/50T	NT10	[N: Surface active compounds containing phosphorus, e.g. lecithin, alkylphosphates ((see ECLA/ICO: A61K7/50K12) takes precedence)] [N0007]
A61K7/50T2	NT11	[N: characterised by special physical form, microcapsules, tissues]
A61K7/50Z	NT10	[N: Microcapsules; Liposomes; Microspheres; Granules; Agglomerates; Matrices] [N0003]
A61K7/50Z4	NT11	[N: Preparations according to more than one of the preceding groups] [N0003]
A61K8/00	NT7	[N: Tissues; Wipes; Sponges] [N0003]

TI: Cosmetic or similar toilet preparations [C0802]

Notes[C0802] Use of cosmetics or similar toilet preparations is further classified in subgroups A61Q.

[N: WARNING:Group (see ECLA/ICO: A61K8/00) subgroups are incomplete. See provisionally; also (see ECLA/ICO: A61K7/00) and subgroup Notes:In each of groups (see ECLA/ICO: A61K8/02) and (see ECLA/ICO: A61K8/16), in absence of an indication of the contrary, classification is made in the last appropriate place.

8.26 x 11.69 in

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Multifile pharmaceutical searching with ECLA in DWPI and INPAFAMDB

Search Question:

How have hypnotics/sedatives been formulated in controlled-release systems in order to provide at least two stages of release:

1) immediate release and 2) extended release?

Background: The client has a patent on the composition of a sedative for treating insomnia that is about to expire. He currently holds no patents on extended release varieties of this substance.

Steps: Multifile pharmaceutical searching with ECLA in DWPI and INPAFAMDB

- Step 1. Use **DWPI** to identify relevant IPC, EPC, and Manual Codes (MC) for our concepts
- Step 2. Search **DWPI** and **INPAFAMDB** for each concept using the classifications and text synonyms found during Step 1
- Step 3. Evaluate **DWPI** and **INPAFAMDB** results and display records of interest in full
- Step 4. In **INPAFAMDB** analyze any results of interest using ICOs to see how the hypnotics/sedatives are formulated

Concepts to use in search

Hypnotic/sedative	Controlled-release	Release-type
Sedative Insomnia Sleep disorder	Controlled release Extended release Sustained release	Immediate Initial (+ Extended)

Note: In this case study we will be using the full Thomson Reuters Subscriber version of the Derwent World Patents Index (DWPI) on STN – [FILE WPIX](#).

Find classifications for “Hypnotic/sedative” by analyzing the results of a broad text search

=> FILE WPIX

Add automatic plurals and abbreviations to the DWPI search.

=> SET PLURALS ON; SET ABBREV ON

=> SET ICFORMAT ON

Ensure standardized pre- and post-reform IPC analysis on STN.

=> S SEDATIVE OR INSOMNIA OR SLEEP DISORDER

L1 11885 S SEDATIVE OR INSOMNIA OR SLEEP DISORDER

=> S L1/TI

L2 3103 (SEDATIVE/TI OR INSOMNIA)

Option: Improve relevance by repeating the search in the DWPI Enhanced Title (/TI) field.

=> ANALYZE L2 1- EPC LEN 11 IPC MC

L3 ANALYZE L2 1- EPC IPC M

ANALYZE the first 11-characters (subgroup) of EPC using **LEN 11**.

Identify relevant IPC codes for “Hypnotic/sedative”

=> FILE STNGUIDE

Tip: Review **ANALYZE**
analysis results in STNGUIDE.

=> D TOP 10 IPC DOC

L3 ANALYZE L2 1- EPC IPC MC LEN 11 : 6514 TERMS

TERM #	# OCC	# DOC	% DOC	EPC	IPC	MC
2	1788	1063	34.26	A61P0025-00		
3	891	779	25.10	A61P0025-20		
12	400	298	9.60	C07D0487-00		
14	609	280	9.02	A61P0043-00		
15	384	270	8.70	C07D0487-04		
18	306	251	8.09	A61P0025-24		
20	563	249	8.02	A61K0031-55		
23	251	233	7.51	A61P0025-08		
25	343	224	7.22	C07D0401-00		
26	268	224	7.22	C07D0243-00		

SET ICFORMAT ON

ensures that pre-reform
IPC codes are the
same length as modern
IPC Reform codes,
providing consistent
analysis throughout the
backfile.

Using **DOC** displays the IPCs in order of the number of documents (records), instead of by number of occurrences.

Review IPC description and hierarchy using the STN online IPC thesaurus

=> FILE LWPI

Tip: Browse the IPC descriptions in a Learning File, e.g., LWPI.

=> E A61P0025-20+HIE/IPC

```
E1          1322    BT2    A61P/IPC
                THERAPEUTIC ACTIVITY OF CHEMICAL COMPOUNDS OR
                MEDICINAL PREPARATIONS
E2          140     BT1    A61P0025-00/IPC
                Drugs for disorders of the nervous system
                CORE
                VALID FROM 20000101 TO PRESENT
E3          24      -->    A61P0025-20/IPC
                . Hypnotics; Sedatives
                ADVANCED
                VALID FROM 20000101 TO PRESENT ( IPC EDITION: 7-8 )
                ****
```

Add this IPC to our list of terms for "Hypnotic/sedative".

Note: CORE and ADVANCED codes are clearly marked.

To learn more about the IPC thesaurus and its relationship codes enter:
HELP RCODES and **HELP THESAURUS**.

Identify relevant ECLA (/EPC) codes for “Hypnotic/sedative”

=> D TOP 15 EPC DOC

L3 ANALYZE L2 1- EPC IPC MC LEN 11 :

TERM #	# OCC	# DOC	% DOC	EPC	IPC	MC
21	307	242	7.80	C07D0487-04		
63	143	123	3.96	C07D0471-04		
139	117	73	2.35	C07D0401-12		
143	83	72	2.32	A61K0031-55		
150	71	70	2.26	C07D0243-24		
175	65	60	1.93	C07D0495-04		
210	61	52	1.68	C07D0295-08		
217	65	51	1.64	C07D0513-04		
240	51	45	1.45	C07D0498-04		
248	64	43	1.39	C07D0401-06		
256	51	42	1.35	A61K0031-49		
257	47	42	1.35	C07D0401-04		
259	43	42	1.35	A61K0031-00		
266	93	40	1.29	C07D0401-14		
270	41	40	1.29	A61K0045-06		

L3 is the analysis of the broad text search (L2).

Note: On STN, ECLA (/EPC) codes have been standardized into IPC Reform format.

The **ANALYZE** of the first 11-characters (subgroup) of EPC using **LEN 11** provides a comparable analysis to IPC (slide 24).

Look-up ECLA (/EPC) code definitions for “Hypnotic/sedative”

How do I use the Classification search? [Get assistance](#) →

Search the European classification

View Section Find classification(s) for keywords Find description for a symbol

Index [A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [Y](#)

Previous page: [C07D477/00](#)

CHEMISTRY; METALLURGY C

ORGANIC CHEMISTRY (such compounds as the oxides, sulfides, or oxysulfides of carbon, cyanogen, phosgene, hydrocyanic acid or salts thereof **C01**; products obtained from layered base-exchange silicates by ion-exchange with organic compounds such as ammonium, phosphonium or sulfonium compounds or by intercalation of organic compounds **C01B33/44**; macromolecular compounds **C08**; dyes **C09**; fermentation products **C12**; fermentation or enzyme-using processes to synthesise a desired chemical compound or composition or to separate optical isomers from a racemic mixture **C12P**; production of organic compounds by electrolysis or electrophoresis **C2**) **C07**

HETEROCYCLIC COMPOUNDS **C07D**

Heterocyclic compounds containing condensed **C07D487**

Heterocyclic compounds containing nitrogen at **C07D487/00**
by **C07D451/00** to **C07D475/00**

in which the condensed system contains two hetero rings **C07D487/02**

Ortho-condensed systems (carbapenicillins **C07D477/00**) **C07D487/04**

The C07D0487-04 and similar codes all refer to the structure of substances in medicinal preparations, so are of no use.

See: <http://v3.espacenet.com/eclarsh>

Look-up ECLA (/EPC) code definitions for “Hypnotic/sedative” (cont.)

A61K31/00	NT7	TI: Medicinal preparations containing organic active ingredients ...
A61K31/045	NT8	TI: Hydroxy compounds, e.g. alcohols; Salts thereof, e.g. alcoholates [C0302]
A61K31/05	NT9	TI: Phenols
A61K31/055	NT10	TI: the aromatic ring being substituted by halogen

Similarly, the A61K0031 codes capture chemical structure aspects of medicinal preparations, so are also of no use here.

Note: This text comes from the ECLA definition PDF file (see slide 17).

Identify relevant Manual Codes (MCs) for “Hypnotic/sedative”

=> D TOP 10 MC DOC

L3 ANALYZE L2 1- EPC IPC MC LE

L3 is the analysis of the
broad text search (L2).

TERM #	# OCC	# DOC	% DOC	EPC	IPC	MC
1	1528	1528	49.24	B12-C08		
4	701	701	22.59	B12-C10		
5	463	463	14.92	B14-J01B1		
6	460	460	14.82	B12-E02		
7	426	426	13.73	B12-D04		
8	415	415	13.37	B12-D01		
9	335	335	10.80	B12-C07		
10	332	332	10.70	B14-C01		
11	322	322	10.38	B14-J01		
13	297	297	9.57	B14-J01B2		

Use online Manual Code thesaurus to view definitions for “Hypnotic/sedative” codes

=> E B12-C08+ALL/MC

```
E1          4034    BT2  B12/MC
                DEF  DIAGNOSTICS AND FORMULATION TYPES
                (THERAPEUTIC, PESTICIDAL, HERBICIDAL)
E2          0      BT1  B12-C/MC
                DEF  CNS-ACTIVE TYPE (I)
E3          43     --> B12-C08/MC
                DEF  SEDATIVE*
                HNTE (1963-1993)
E4          11     RT   B14-J01B2/MC
                DEF  SEDATIVE
                HNTE (1994-      )
***** END *****
```

Add this MC to our list of terms for “Hypnotic/sedative”.

Related term (RT) B14-J01B2 is the newer code for sedative, from 1994-date (next slide...).

Learn more about DWPI Chemical & Life Science Manual Codes (MC):
<http://scientific.thomson.com/support/patents/dwpioref/reftools/classification/cpi-codes/>

Look up Related Term B14-J01B2 in the online thesaurus

=> E B14-J01B2+ALL/MC

```
E1          2723    BT4   B14/MC
              DEF   PHARMACEUTICAL ACTIVITIES

E2           0      BT3   B14-J/MC
              DEF   DRUGS ACTING ON THE MUSCULAR AND NERVOUS
                   SYSTEMS

E3          174     BT2   B14-J01/MC
              DEF   CNS ACTIVE GENERAL AND OTHER
              HNTE  (1994-    )

E4           8      BT1   B14-J01B/MC
              DEF   DEPRESSANTS GENERAL
              HNTE  (1994-    )

E5          11      -->  B14-J01B2/MC
              DEF   SEDATIVE
              HNTE  (1994-    )

E6           43     RT    B12-C08/MC
              DEF   SEDATIVE*
              HNTE  (1963-1993)
```

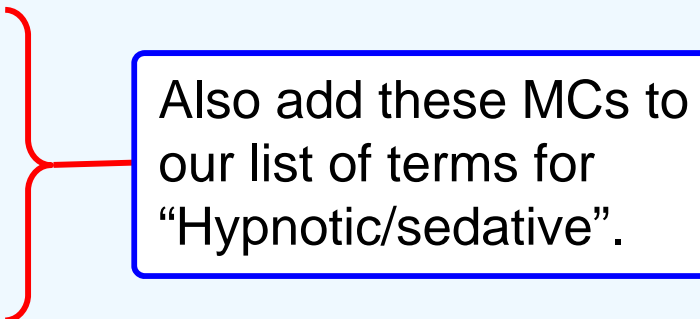
Add this MC to our list of terms for "Hypnotic/sedative".

Cross-reference back to older term B12-C08 (previous slide).

***** END *****

Use online Manual Code thesaurus to view definitions for “Hypnotic/sedative” codes

```
=> E B14-J01B1+ALL/MC
E1          2723    BT4  B14/MC
              DEF  PHARMACEUTICAL ACTIVITIES
E2           0     BT3  B14-J/MC
              DEF  DRUGS ACTING ON THE MUSCULAR AND NERVOUS
                   SYSTEMS
E3          174    BT2  B14-J01/MC
              DEF  CNS ACTIVE GENERAL AND OTHER
                   HNTE (1994-    )
E4           8     BT1  B14-J01B/MC
              DEF  DEPRESSANTS GENERAL AND OTHER
                   HNTE (1994-    )
E5          12     --> B14-J01B1/MC
                   DEF  HYPNOTIC
                   HNTE (1994-    )
E6          11     RT   B12-C07/MC
                   DEF  HYPNOTIC*
                   HNTE (1963-1993)
*****      END      *****
```



Also add these MCs to our list of terms for “Hypnotic/sedative”.

Add new terms for Hypnotic/sedative

Hypnotic/sedative	Controlled-release	Release-type
Sedation, Sedative Hypnotic Sleep aid, Sleep disorder Sleeplessness, Insomnia A61K/IPC, A61P/IPC A61P0025-20/IPC B12-C08/MC B12-C07/MC B14-J01B1/MC B14-J01B2/MC (P445 OR P447)/M0-M6	Controlled release Extended release Sustained release	Immediate release Initial release (+ Extended)

For additional information on Fragmentation Codes, see:
www.thomsonscientific.com/media/scpdf/chemindguide.pdf

Find classifications for “Controlled-release” by analyzing the results of a broad text search

=> FILE WPIX

=> S S (CONTROLLED OR EXTENDED OR SUSTAINED) AND RELEASE
L4 41873 (CONTROLLED OR EXTENDED OR SUSTAINED) AND RELEASE

=> S L4/TI AND A61K/IPC

Option: A61K /IPC limits this search to “Medical, dental, or toilet preparations.”

L5 5152 ((CONTROLLED/TI OR EXTENDED/TI OR SUSTAINED/TI) AND
RELEASE/TI) AND A61K/IPC

=> ANALYZE L5 1- EPC LEN 11 IPC MC

L6 ANALYZE L5 1- EPC

ANALYZE all relevant fields at the same time to incur a single **ANALYZE** fee.

=> FILE STNGUIDE

Find relevant IPC and EPC codes for “Controlled-release”

=> D TOP 6 DOC IPC

L6 ANALYZE L5 1- EPC IPC MC LEN 11 : 7300 TERMS

TERM #	# OCC	# DOC	% DOC	EPC	IPC	MC
3	4567	1823	35.38	A61K0009-22		
4	3558	1456	28.26	A61K0009-20		
5	3408	1429	27.74	A61K0009-00		
9	2648	1057	20.52	A61K0009-16		
10	2225	1046	20.30	A61K0009-52		
13	1944	819	15.90	A61K0009-50		

Notice how similar the IPC and EPC codes appear to be.

=> D TOP 6 DOC EPC

L6 ANALYZE L5 1- EPC IPC MC LEN 11 : 7300 TERMS

TERM #	# OCC	# DOC	% DOC	EPC	IPC	MC
7	2453	1381	26.81	A61K0009-20		
8	1299	1073	20.83	A61K0009-00		
15	1109	700	13.59	A61K0009-16		
16	934	652	12.66	A61K0009-50		
42	482	330	6.41	A61K0009-28		
82	284	202	3.92	A61K0047-48		

Review the IPC codes for “Controlled-release” via the online IPC thesaurus

=> FILE LWPI

=> E A61K009-00+HIE/IPC

. . .

E20 145 NT1

A61K0009-20/IPC
. Pills, lozenges or tablets

CORE

VALID FROM 19740701 TO PRESENT (IPC EDITION: 2-8)

E21 52 NT2

A61K0009-22/IPC
. . Sustained or differential release type

CORE

VALID FROM 19740701 TO PRESENT (IPC EDITION: 2-8)

E22 10 NT3

A61K0009-24/IPC
. . . Layered or laminated unitary dosage forms

CORE

VALID FROM 19740701 TO PRESENT (IPC EDITION: 2-8)

NT3

A61K0009-26/IPC
. . . Discrete particles in supporting matrix

CORE

VALID FROM 19740701 TO PRESENT (IPC EDITION: 2-8)

E24 25 NT2

A61K0009-28/IPC
. . Dragees; Coated pills or tablets

CORE

VALID FROM 19740701 TO PRESENT

. . .

This IPC and all narrower terms appear to be very relevant.

Review the IPC codes for “Controlled-release” via the online IPC thesaurus (cont.)

=> E A61K009-00+HIE/IPC (Cont.)

. . .

E34 89 NT1 A61K0009-48/IPC
 . Preparations in capsules, e.g. of gelatin, of
 chocolate
 CORE
 VALID FROM 19740701 TO PRESENT (IPC EDITION: 2-8)

. . .

E37 28 NT2 A61K0009-52/IPC
 . Sustained or differential release type
 CORE
 VALID FROM 19740701 TO PRESENT (IPC EDITION: 2-8)
 NT3 A61K0009-54/IPC
 . . . containing discrete particles with coatings of
 different thicknesses or different materials
 ADVANCED
 VALID FROM 19740701 TO PRESENT (IPC EDITION: 2-8)
 NT4 A61K0009-56/IPC
 Organic coatings
 ADVANCED
 VALID FROM 19740701 TO PRESENT (IPC EDITION: 2-8)

. . .

This IPC and all narrower terms appear to be very relevant.

Review the ECLA (/EPC) codes for “Controlled-release”

A61K9/00	NT7	TI: Medicinal preparations characterised by special physical form. . .
A61K9/14	NT8	TI: Particulate form, e.g. powders, [N:Processes for size reducing of pure drugs or the resulting products, Pure drug nanoparticles. . .
A61K9/16	NT9	TI: Agglomerates; Granulates; Microbeadlets...
A61K9/16H	NT10	[N: Microparticles characterised by the matrix material]
A61K9/16H6	NT11	[N: Organic macromolecular compounds]
A61K9/16H6D	NT12	[N: obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds]
A61K9/16H6D4	NT13	[N: Polyesters]
...		
A61K9/20	NT8	TI: Pills, tablets...
A61K9/20H	NT9	[N: Excipients or additives]
A61K9/20H4	NT10	[N: Organic compounds]
...		
A61K9/20H6	NT10	[N: Organic macromolecular compounds]
A61K9/20H6B	NT11	[N: obtained by reactions only involving carbon-to-carbon unsaturated bonds]

The descriptions of the EPCs are very different from the IPCs, although the codes look similar.

Note: This text comes from the ECLA definition PDF file (see slide 17).

Find relevant Manual Codes for "Controlled-release"

=> D TOP 6 DOC MC

L6 ANALYZE L5 1- EPC IPC MC LEN 11 :

TERM #	# OCC	# DOC	% DOC	EPC	IPC	MC
1	3250	3250	63.08	A12-V01		
2	2424	2419	46.95	B12-M10A		
6	1393	1391	27.00	B12-M10		
11	1043	1042	20.23	B04-C03		
12	938	937	18.19	B04-C03B		
14	718	718	13.94	B04-C02A2		

L6 is the analysis of the broad text search (L5).

Tip: B12-M Manual Codes (MC) are drug formulation and delivery codes.

=> D TOP 6 MC DOC WITH "B12-M"

L6 ANALYZE L5 1- EPC IPC MC LEN 11 : 7300 TERMS

TERM #	# OCC	# DOC	% DOC	EPC	IPC	MC
2	2424	2419	46.95	B12-M10A		
6	1393	1391	27.00	B12-M10		
18	638	638	12.38	B12-M11B		
43	326	326	6.33	B12-M11D		
45	323	323	6.27	B12-M11		
50	305	305	5.92	B12-M11C		

Use **WITH** to display just those **ANALYZE** terms with a particular text string present.

Use online Manual Code thesaurus to view definitions for “Controlled-release” codes

=> FILE LWPI

=> E B12-M10+ALL/MC

. . .

E3 51 DEF FORMULATIONS TYPE
--> B12-M10/MC

DEF SUSTAINED AND DELAYED RELEASE (GENERAL)

E4 64

NT1 B12-M10A/MC

DEF SUSTAINED RELEASE (GENERAL)

HNTE (1986-)

Relevant to the
“Controlled-
release” search.

NT2 B12-M10A3/MC

DEF MULTI-LAYER TABLET TYPE

HNTE (2005-)

This is also
relevant to the
“Release-type”
search (later).

. . .

E12 9

NT1 B12-M10B/MC

DEF DELAYED RELEASE

HNTE (1986-)

. . .

E14 1

NT1 B12-M10D/MC

DEF PULSED RELEASE

HNTE (2005-)

. . .

Add new terms for Controlled-release

Hypnotic/sedative	Controlled-release	Release-type
Sedation, Sedative	Controlled/Extended	Immediate release
Hypnotic	Prolonged/Delayed	Initial release
Sleep aid, Sleep disorder	Sustained/Continuous	(+ Extended)
Sleeplessness, Insomnia	Pulsed/Pulsating Release	
A61K/IPC, A61P/IPC	A61K/IPC	
A61P0025-20/IPC	A61K009-22+NT/IPC	
B12-C08/MC	A61K009-52+NT/IPC	
B12-C07/MC	B12-M10A+NT/MC	
B14-J01B1/MC	B12-M10B/MC	
B14-J01B2/MC	B12-M10D/MC	
(P445 OR P447)/M0-M6	R05!/M0-M6	

For additional information on Fragmentation Codes, see:
www.thomsonscientific.com/media/scpdf/chemindguide.pdf

Find classifications for “Release-type” by analyzing the results of a broad text search

=> FILE WPIX

L5 is the general search for controlled, sustained or extended release (slide 34).

=> S L5 AND (IMMEDIATE OR INITIAL)(3A)RELEASE

L7 522 S L5 AND (IMMEDIATE OR INITIAL)(3A)RELEASE

=> D SCAN

Use the free-of-charge **D SCAN** format for a quick review of the search results.

L7 522 ANSWERS WPIX COPY

AN 2008-E99859 WPIX

TI Chronotherapeutic combination pharmaceutical formulation (e.g. pill) for treating atherosclerosis and hypertension has **controlled-release** part containing dihydropyridine and **immediate-release** part containing statin

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

=> ANALYZE L7 1- EPC IPC MC

L8 ANALYZE L7 1- EPC IPC MC :

Note: This time the full-length detail of the ECLA (/EPC) is analyzed.

=> FILE STNGUIDE

Find relevant IPC codes for “Release-type”

=> D TOP 15 IPC DOC

L8 ANALYZE L7 1- EPC IPC MC : 2045 TE

TERM #	# OCC	# DOC	% DOC	EPC	IPC	MC
2	761	257	49.23	A61K0009-22		
4	588	217	41.57	A61K0009-20		
5	342	154	29.50	A61K0009-52		
8	344	136	26.05	A61K0009-50		
9	345	132	25.29	A61K0009-16		
10	362	127	24.33	A61K0009-24		
11	305	121	23.18	A61K0009-00		
19	229	89	17.05	A61K0009-28		
20	197	84	16.09	A61K0047-38		
24	177	74	14.18	A61K0009-26		
25	117	73	13.98	A61P0025-00		
28	120	71	13.60	A61K0009-30		
29	168	68	13.03	A61K0009-48		
30	155	66	12.64	A61K0047-32		
31	69	66	12.64	A61K		

L8 is the analysis of the broad text search (L7).

These IPC definitions were already explored in the general “Controlled-release” search (slide 34).

Note: there are no IPCs that exactly represent the “immediate + extended” concept which we need.

Find relevant ECLA (/EPC) codes for "Release-type"

=> D TOP 15 EPC DOC

L8 ANALYZE L7 1- EPC IPC MC : 2045 TERMS

TERM #	# OCC	# DOC	% DOC	EPC IPC MC
15	98	98	18.77	A61K0009-20K4B
18	92	92	17.62	A61K0009-20H6F2
33	61	61	11.69	A61K0009-50M
39	56	56	10.73	A61K0009-50K2
60	40	40	7.66	A61K0009-20H6B
64	38	38	7.28	A61K0009-00L4
65	38	38	7.28	A61K0009-28H6F2
73	35	35	6.70	A61K0009-20K2
78	32	32	6.13	A61K0009-20H4
79	31	31	5.94	A61K0009-16H6D4
85	30	30	5.75	A61K0009-20H4B
94	28	28	5.36	A61K0045-06
101	26	26	4.98	A61K0009-48A
108	25	25	4.79	A61K0009-16H4
116	24	24	4.60	A61K0009-20H2
117	24	24	4.60	A61K0009-20K2B

Although the IPCs and ECLA seem to be very similar to each other, the ECLA have more subdivisions to explore.

Look-up ECLA (/EPC) code definitions for “Release-type” (cont.)

A61K9/00	NT7	TI: Medicinal preparations characterised by special physical form...
A61K9/48	NT8	TI: Preparations in capsules, e.g. of gelatin, of chocolate...
A61K9/48A	NT9	[N: characterised by the form, e.g. multiple, structured fill; Pulsincap R; Capsule containing several small tablets: Capsule with outer layer for immediate drug release] [C0204]
A61K9/48B	NT9	[N: Wall forming material] [C9803]
A61K9/48C	NT9	[N: Encapsulating processes; Filling of capsules
A61K9/48H	NT9	[N: Filling carrier
A61K9/48P	NT9	[N: Capsule finishing, e.g. dyeing, aromatising, polishing]
A61K9/48Z	NT9	[N: Coated capsules; Multilayered drug free capsule shells] [C0204]
A61K9/50	NT9	TI: Microcapsules ...

This ECLA is very close to the Release-type concept we need.

Note: This text comes from the ECLA definition PDF file (see slide 17).

Find relevant Manual Codes (MC) for “Release-type”

=> D TOP 15 DOC MC WITH "B12-M"

L8 ANALYZE L7 1- EPC IPC MC : 2045 TR

TERM #	# OCC	# DOC	% DOC	EPC	IPC	MC
3	240	240	45.98	B12-M10A		
6	153	153	29.31	B12-M10		
12	112	112	21.46	B12-M11B		
23	75	75	14.37	B12-M12N		
37	57	57	10.92	B12-M11K		
40	56	56	10.73	B12-M11C		
42	52	52	9.96	B12-M10B		
54	44	44	8.43	B12-M10C		
68	37	37	7.09	B12-M11D		
81	31	31	5.94	B12-M11		
88	30	30	5.75	B12-M11E		
129	22	22	4.21	B12-M10A3		
201	15	15	2.87	B12-M10A4		
244	12	12	2.30	B12-M10A6		
288	10	10	1.92	B12-M03		
289	10	10	1.92	B12-M07		
290	10	10	1.92	B12-M09		
291	10	10	1.92	B12-M11G		

L8 is the analysis of the broad text search (L7).

Use **WITH** to display just those **ANALYZE** terms with a particular text string present.

Tip: B12-M Manual Codes (MC) are drug formulation and delivery codes.

Use online Manual Code (MC) thesaurus to review definitions for “Release-type” codes

```
=> FILE LWPI
```

```
=> E B12-M11+ALL/MC
```

```
E1          4034    BT2  B12/MC
```

```
DEF  DIAGNOSTICS AND FORMULATION TYPES  
      (THERAPEUTIC, PESTICIDAL, HERBICIDAL)
```

```
E2          0      BT1  B12-M/MC
```

```
DEF  FORMULATIONS TYPE
```

```
E3          88      --> B12-M11/MC
```

```
DEF  TABLETS, CAPSULES E
```

```
. . .
```

```
E14         6      NT1  B12-M11K/MC
```

```
DEF  TABLET WITH TWO OR MORE COATING LAYERS
```

```
HNTE (1994-    )
```

```
. . .
```

```
E19         0      NT1  B12-M11Q/MC
```

```
DEF  NANOPARTICLES
```

```
HNTE (2008-    )
```

```
***** END *****
```

Add this MC to our list of terms for the “Release-type” search.

Add new terms for Release-type

Hypnotic/sedative	Controlled-release	Release-type
Sedative, Sedation	Controlled/Extended	Immediate/Initial/First
Hypnotic	Prolonged/Delayed	Biphasic/Dual release
Sleep aid, Sleep disorder	Sustained/Continuous	Multilayer/coated
Sleeplessness, Insomnia	Pulsed/Pulsating Release	Tablet/capsule
A61K/IPC, A61P/IPC	A61K/IPC	
A61P0025-20/IPC	A61K009-22+NT/IPC	A61K0009-20K4B/EPC
B12-C08/MC	A61K009-52+NT/IPC	A61K0009-50K?/EPC
B12-C07/MC	B12-M10A+NT/MC	A61K0009-50M/EPC
B14-J01B1/MC	B12-M10B/MC	A61K0009-48A/EPC
B14-J01B2/MC	B12-M10D/MC	B12-M10A3/MC
(P445 OR P447)/M0-M6	R05!/M0-M6	B12-M11K/MC

Steps: Multifile pharmaceutical searching with ECLA in DWPI and INPAFAMDB

- Step 1. Use DWPI to identify relevant IPC, EPC, and Manual Codes (MC) for our concepts
- Step 2. Search **DWPI** and **INPAFAMDB** for each concept using the classifications and text synonyms found during Step 1
- Step 3. Evaluate DWPI and INPAFAMDB results and display records of interest in full
- Step 4. In INPAFAMDB analyze any results of interest using ICO to see how the hypnotics/sedatives are formulated

Text and code search for “Hypnotic/sedative”

=> FILE WPIX

=> S (SEDATIVE OR SEDATION OR HYPNOTIC OR SLEEP AID OR
SLEEP DISORDER OR SLEEPLESSNESS OR INSOMNIA) AND
(A61K OR A61P)/IPC

L1 9948 (SEDATIVE OR SEDATION OR HYPNOTIC OR SLEEP AID OR
SLEEP DISORDER OR SLEEPLESSNESS OR INSOMNIA) AND
(A61K OR A61P)/IPC

=> S A61P0025-20/IPC

L2 5366 A61P0025-20/IPC

IPC for “Hypnotic/sedative”.

=> S (B12-C08 OR B12-C07 OR B14-J01B1 OR B14-J01B2)/MC OR
(P445 OR P447)/M0,M1,M2,M3,M5,M6

B12-C08 SEDATIVE*

B12-C07 HYPNOTIC*

B14-J01B1 HYPNOTIC

B14-J01B2 SEDATIVE

Whenever Manual Codes
(/MC) are searched, their
definitions are displayed.

L3 12221 (B12-C08 OR B12-C07 OR B14-J01B1 OR B14-J01B2)/MC OR
(P445 OR P447)/M0,M1,M2,M3,M5,M6

=> S L1-L3

L4 17619 (L1 OR L2 OR L3)

Text and code search for “Controlled-release”

```
=> S ((CONTROLLED OR EXTENDED OR PROLONGED OR DELAYED OR  
SUSTAINED OR CONTINUOUS## OR PULSED OR PULSATING OR  
MODULATED)(3A)RELEASE#) AND A61K/IPC
```

```
L5 14017 ((CONTROLLED OR EXTENDED OR PROLONGED  
SUSTAINED OR CONTINUOUS## OR PULSED  
MODULATED)(3A)RELEASE#) AND A61K/IPC
```

IPC codes for sustained
/ differential release pills
and capsules.

```
=> S (A61K0009-22+NT/IPC OR A61K0009-52+NT/IPC)
```

```
L6 10865 (A61K0009-22+NT/IPC OR A61K0009-52+NT/IPC)
```

```
=> S (B12-M10A+NT OR B12-M10B OR B12-M10D)/MC OR  
R05!/M0,M1,M2,M3,M5,M6
```

```
B12-M10A SUSTAINED RELEASE (GENERAL)
```

```
B12-M10B DELAYED RELEASE
```

```
B12-M10D PULSED RELEASE
```

```
L7 21481 (B12-M10A+NT OR B12-M10B OR B12-M10D)/MC OR  
R05!/M0,M1,M2,M3,M5,M6
```

Whenever Manual Codes
(/MC) are searched, their
definitions are displayed.

```
=> S L5-L7
```

```
L8 30897 (L5 OR L6 OR L7)
```

Text and code search for “Release-type”

=> S ((IMMEDIATE## OR INITIAL## OR FIRST## OR BI(W)PHASIC
OR BIPHASIC OR DUAL OR DIFFERENTIAL##)(3A)RELEASE#)

L9 9574 ((IMMEDIATE## OR INITIAL## OR FIRST## OR BI(W)PHASIC
OR BIPHASIC OR DUAL OR DIFFERENTIAL##)

=> S A61K0009-48A/EPC OR K61K0009-48A/ICO

L10 434 A61K0009-48A/EPC OR K61K0009:48A/ICO

=> S (MULTILAYER OR MULTI(W)LAYER OR COATED OR
COATING#)(3A)(?TABLET? OR ?CAPSULE?)

L11 6893 (MULTILAYER OR MULTI(W)LAYER OR COATED OR
COATING#)(3A)(?TABLET? OR ?CAPSULE?)

=> S (A61K0009-20K4B OR A61K0009-50K? OR A61K0009-50M)/EPC OR
(K61K0009-20K4B OR K61K0009-50K? OR K61K0009-50M)/ICO

L12 2247 (A61K0009-20K4B OR A61K0009-50K? OR A61K0009-50M)/EPC OR
(K61K0009:20K4B OR K61K0009:50K? OR K61K0009:50M)/ICO

=> S (B12-M11K OR B12-M10A3)/MC

B12-M11K TABLET WITH TWO OR MORE COATING LAYERS

B12-M10A3 MULTI-LAYER TABLET TYPE

L13 1254 (B12-M11K OR B12-M10A3)/MC

=> S L9-L13

L14 18189 (L9 OR L10 OR L11 OR L12 OR L13)

ECLA and ICO for
capsules providing:
1) immediate release
2) extended release

ECLA and ICO for
multi-layer tablets
and capsules (L12).

Combine concepts and use D SCAN to review DWPI enhanced patent titles

=> S L4 AND L8 AND L14
L15 424 L4 AND L8 AND L14

L4 = Hypnotic/sedative (slide 51).
L8 = Controlled-release (slide 52).
L14 = Release-type (slide 53).

=> D SCAN

L15 424 ANSWERS WPIX COPYRIGHT 2008 THOMSON REUTERS on STN
AN 2003-312624 WPIX
TI **Controlled release** dosage form with variable release rates comprises a bi- or **multi-layer tablet** core and an insoluble casing covering the majority of the tablet surface

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):30

L15 424 ANSWERS WPIX COPYRIGHT 2008 THOMSON REUTERS on STN
AN 2004-431816 WPIX
TI Composition, useful to treat **sleep disorders** e.g. acute and chronic, comprises a first component comprising a short-acting **hypnotic** or a salt and a second component comprising at least one particle

L15 424 ANSWERS WPIX COPYRIGHT 2008 THOMSON REUTERS on STN
AN 2004-090630 WPIX
TI Oral composition for the **biphasic release** of a drug comprises the drug, sugar and a gas-generating component in a porous matrix

. . . .

The DWPI search results can be sorted by relevance using the FOCUS command

=> **FOCUS L15**

PROCESSING COMPLETED FOR L15
L16 424 FOCUS L15 1-

=> **D AN TI 1-30**

L16 ANSWER 1 OF 424 WPIX COPYRIGHT 2008 THOMSON REUTERS on STN
AN 2000-367873 [32] WPIX
TI Pharmaceutical composition for **controlled release** comprising a short acting **hypnotic** which is **released** in a **first immediate release** phase and a second **prolonged release** phase

L16 ANSWER 2 OF 424 WPIX COPYRIGHT 2008 THOMSON REUTERS on STN
AN 1998-230406 [20] WPIX
TI Oral **delayed immediate release** formulations - comprises compressed core containing e.g. anti-asthmatic compound, coated with polymeric coating material, e.g. ethyl cellulose

L16 ANSWER 3 OF 424 WPIX COPYRIGHT 2008 THOMSON REUTERS on STN
AN 2001-193057 [20] WPIX
TI Pharmaceutical composition useful for inducing and maintaining sleep comprises a new **dual-release** dosage form that releases a short-acting **hypnotic** in two pulses

At first glance, the top answers look like quite close matches to our original search question.

. . . .

Use the TRIAL format to review DWPI records and classification codes

=> D TRIAL 1-30

After **FOCUS** the top record has many of the codes and text terms that were searched.

```
L16 ANSWER 1 OF 424 WPIX COPYRIGHT
AN 2000-367873 [32] WPIX
TI Pharmaceutical composition for controlled release comprising a short
  acting hypnotic which is released in a first immediate release phase
  and a second prolonged release phase
DC A96; B02; B07
IC ICM A61K0031-415; A61K0031-4184; A61K0031-437; A61K0009-22
IPCI A61K0031-415 [I,A]; A61K0031-415 [I,C]; A61K0009-00 [I,A]; A61K0009-00 [I,A];
A61K0009-00 [I,C]; A61K0009-00 [I,C]; A61K0009-20 [I,A]; A61K0009-20 [I,A];
A61K0009-20 [I,C]; A61K0009-20 [I,C]; A61K0009-48 [I,A]; A61K0009-48 [I,A];
A61K0009-48 [I,C]; A61K0009-48 [I,C]; A61K0009-50 [I,A]; A61K0009-50 [I,A];
A61K0009-50 [I,C]; A61K0009-50 [I,C]
IPCR A61K0031-415 [I,A]; A61K0031-415 [I,C]; A61K0031-4353 [I,C]; A61K0031-437 [I,A];
A61K0031-496 [I,A]; A61K0031-496 [I,C]; A61K0031-519 [I,A]; A61K0031-519 [I,C];
A61K0047-12 [I,A]; A61K0047-12 [I,C]; A61K0047-38 [I,A]; A61K0047-38 [I,C];
A61K0009-00 [I,A]; A61K0009-00 [I,C]; A61K0009-20 [I,A]; A61K0009-20 [I,C];
A61K0009-22 [I,A]; A61K0009-22 [I,C]; A61K0009-24 [I,A]; A61K0009-24 [I,C];
A61K0009-26 [I,A]; A61K0009-26 [I,C]; A61K0009-30 [I,C]; A61K0009-36 [I,A];
A61K0009-48 [I,A]; A61K0009-48 [I,C]; A61K0009-50 [I,A];
A61K0009-50 [I,C]; A61K0009-52 [I,A]; A61K0009-52 [I,C];
A61P0025-00 [I,C]; A61P0025-20 [I,A]
EPC A61K0009-20K2B; A61K0009-20K4B; A61K0009-48A; A61K0009-50M; A61K0031-437;
A61K0031-496; A61K0031-519
MC CPI: A03-A04A1; A12-V01; B04-C02A; B06-D05; B06-D08; B12-M10A; B12-M11B;
B14-J01B1; B14-J01B2
```

Use the FULL format to display DWPI patent family and value-added abstract

=> D FULL

```
L16 ANSWER 1 OF 424 WPIX COPYRIGHT 2008 THOMSON REUTERS on STN
AN 2000-367873 [32] WPIX
TI Pharmaceutical composition for controlled release comprising a short acting
hypnotic which is released in a first immediate release phase and a second
prolonged release phase
DC A96; B02; B07
IN ALAUX G; ANDRE F; LEWIS G
PA (SNFI-C) SANOFI-AVENTIS; (SNFI-C) SANOFI-SYNTHELABO; (SYNO-C) SYNTHELABO
PI EP 1005863 A1 20000607 (200032)* EN 24[10]
. . . .
US 6514531 B1 20030204 (200313) EN
NZ 511750 A 20031031 (200380) EN
TW 565448 A 20031211 (200434) ZH
AU 771902 B2 20040408 (200456) EN
MX 219636 B 20040330 (200474) ES
EP 1135125 B1 20050316 (200522) EN
DE 69924283 E 20050421 (200528) DE
ES 2239479 T3 20050916 (200562) ES
DE 69924283 T2 20060330 (200623) DE
CN 1212838 C 20050803 (200655) ZH
IL 143146 A 20070920 (200765) EN
DE 69924283 T8 20080521 (200834) DE
ADT EP 1005863 A1 EP 1998-403037 19981204; BR 9915939 A BR 1999-15939 19991201 . . .
PRAI EP 1998-403037 19981204
```

This DWPI patent family (PI) has had some quite recent additions.

Use the FULL format to display DWPI patent family and value-added abstract (cont.)

=> D FULL (cont.)

TECH PHARMACEUTICALS - Preferred Composition: The first phase has a maximum duration of 30 minutes. The second phase has a profile of zero order release, a profile where the release is proportional to the square root of the time, a profile of **first order release** or a sigmoidal release profile. 40 - 70 of the total of the **hypnotic** is **released** during the **immediate release** phase. Time for release of 90 % of the total **hypnotic** is 2 - 6 hours.

Preferred Materials: The **prolonged release** entity comprises organic acid selected from citric, adipic or succinic acids in their acid form or salts or isomers. The **hypnotic** is **zolpidem**, (R)-zopicolone, or zalepon. **prolonged release** coating layers comprise a hydrophilic polymer, preferably a cellulose derivative.

Note: zolpidem is the generic drug name for the Sanofi-Aventis drug **AMBIEN CR®**.

ABEX EXAMPLE - **Prolonged release** tablets comprising 10 mg zolpidem hemitartrate were prepared as below. Zolpidem hemitartrate 8.3%, lactose 86.6 %, citric acid 2.5 % and hydroxypropyl methylcellulose 2.1 % were mixed together, granulated with water, dried and calibrated. The granulate was the mixed with magnesium stearate 0.5 % and compressed to a mass of 120 mg per **tablet**. The **tablets** were **coated** to a composition comprising ethylcellulose 2 %, diethyl phthalate 0.4 %, hydroxypropyl methylcellulose 2.0 %, isopropanol 47.8 %, and dichloromethane 47.8 %. - In vitro dissolution profiles were determined in 0.1 N hydrochloric acid 0,01 M and 900 ml of water maintained at 37 +/- 0.5 degrees C. Prolonged release was determined by the drawing. - In a comparative example

TECH and ABEX provide additional technical details to AB (previous slide).

FS CPI

MC CPI: A03-A04A1; A12-V01; B04-C02A; B06-D05; B06-D08; **B12-M10A**; B12-M11B; **B14-J01B1**; **B14-J01B2**

Including INPAFAMDB in a multfile patent search with DWPI is quite straightforward

```
=> FILE INPAFAMDB
```

Re-run the search query without Manual Codes (MC) in INPAFAMDB.

```
=> S L1-L2 AND L5-L6 AND L9-L12
```

```
L17      62 (L1 OR L2) AND (L5 OR
```

L1-L2 = Hypnotic/sedative (slide 51).
L5-L6 = Controlled-release (slide 52).
L9-L12 = Release-type (slide 53).

```
=> TRANSFER L15 1- PN
```

```
L18      TRANSFER L15 1- PN :
```

2649 TERMS

```
L19      408 L18
```

Use **TRANSFER PN** from DWPI (L15) to retrieve the corresponding INPAFAMDB family records (L19).

```
=> S L17 NOT L19
```

```
L20      14 L17 NOT L19
```

Isolate and review the 14 uniquely retrieved INPAFAMDB families (L20).

```
=> D TRIAL 1-14 . . . .
```

Review the uniquely retrieved INPAFAMDB records in free-of-charge TRIAL format

```
L20 ANSWER 1 OF 14 INPAFAMDB COPYRIGHT 2008 EPO/FIZ KA on STN
TIEN NON-BENZODIAZEPINE HYPNOTIC COMPOSITIONS.
IPCI A61K0031-519 [I,A ]; A61K0009-20 [I,A ]; A61K0031-519 [I,C*];
A61K0009-20 [I,C*]; A61K0031-519 [I,A ]; A61K0009-20 [I,A ];
A61K0031-519 [I,C*]; A61K0009-20 [I,C*]
EPC A61K0009-16H8; A61K0009-14H6; A61K0009-16H6B; A61K0031-519
ICO K61K0009:20H4; K61K0009:20H6F
. . .

L20 ANSWER 9 OF 14 INPAFAMDB COPYRIGHT 2008 EPO/FIZ KA on STN
TIEN Anticholinergic preparation.
IPCR A61K0009-22 [I,A ]; A61K0009-50 [I,A ]; A61K0047-48 [I,A ];
A61K0009-22 [I,C*]; A61K0009-50 [I,C*]; A61K0047-48 [I,C*];
A61K0009-22 [I,A ]; A61K0009-50 [I,A ]; A61K0047-48 [I,A ];
A61K0009-22 [I,C*]; A61K0009-50 [I,C*]; A61K0047-48 [I,C*]
EPC A61K0009-50K2; A61K0009-50M; A61K0047-48K4D
. . .

L20 ANSWER 13 OF 14 INPAFAMDB COPYRIGHT 2008 EPO/FIZ KA on STN
TIEN Sustained release type of pharmaceutical vehicles.
IPCR A61K0009-22 [I,A ]; A61K0009-50 [I,A ]; A61K0009-22 [I,C*];
A61K0009-50 [I,C*]; A61K0009-22 [I,A ]; A61K0009-50 [I,A ];
A61K0009-22 [I,C*]; A61K0009-50 [I,C*]
EPC A61K0009-50H4; A61K0009-50K2; A61K0009-50M
```

Use the BRIEF format in INPAFAMDB to display title, abstract & patent family

=> D BRIEF 13

This abstract is from a U.K. (GB) patent document published in 1963.

L20 ANSWER 13 OF 14 INPAFAMDB COPY
AN 6441923 INPAFAMDB UPFB 20070705 U
TI **Sustained release** type of pharmaceutical vehicles.
INS SHEPARD MARK
PAS KEY PHARMA
IPCR **A61K0009-22 [I,A]**; **A61K0009-50 [I,A]**; **A61K0009-22 [I,C*]**;
A61K0009-50 [I,C*]
EPC **A61K0009-50H4**; **A61K0009-50K2**; **A61K0009-50M**
AB (GB 935602 A)
A retardant coating composition for oral pharmaceutical dosage forms comprises a mixture of from 93 to 95% by weight of a glyceride of a fatty acid or fatty oil, 1% beeswax and from 4 to 6% of one or more fatty alcohols. . . the outermost medicament layer may be uncoated to allow for **immediate release** of the medicament contained therein. The coatings may be applied by conventional methods, e.g. pan-coating using solutions of the coating materials in volatile solvents. . . Examples include dosage units comprising d-amphetamine sulphate and an outer coating of a **sedative**, e.g. phenobarbital; medicaments which cause visitation in the stomach, e.g. salicylates, ferrous compounds, zoxazolamine and phenylbutazine and isoproterenol in pellets from which a portion of the medicament is **released immediately** on administration and the remainder is released in portions each hour for ten hours. Specification 837,550 is referred to.

Use the BRIEF format in INPAFAMDB to display title, abstract & patent family (cont.)

=> D BRIEF 13 (cont.)

. . . .

PATENT FAMILY INFORMATION INPAFAMDB

+----- PUBLICATIONS -----+

BE 659324	A	19650528
CH 423100	A	19661031
DE 1467961	A1	19700416
FR 1382054	A	19641218
GB 935602	A	19630828
NL 122039	C	
NL 270408	A	
US 3080294	A	19630305

+----- APPLICATIONS -----+

BE 1965-659324	A	19650205
CH 1961-12055	A	19611018
DE 1961-1467961	A	19611017
FR 1961-876481	A	19611220
GB 1961-35123	A	19610929
NL -122039D	A	
NL -270408D	A	
US 1960-63736	A	19601020

+----- PRIORITIES -----+

FR 1961-876481	A	19611220
US 1960-63736	A	19601020

2 priorities, 8 applications, 8 publications

Remember the question?

Search Question:

How have hypnotics/sedatives been formulated in controlled-release systems in order to provide at least two stages of release:

1) immediate release and 2) extended release?

The DWPI and INPAFAMDB results have at least one very good answer, but the client would actually like to know ALL the methods used by others to achieve the desired result.

Steps: Multifile pharmaceutical searching with ECLA in DWPI and INPAFAMDB

- Step 1. Use DWPI to identify relevant IPC, EPC, and Manual Codes (MC) for our concepts
- Step 2. Search DWPI and INPAFAMDB for each concept using the classifications and text synonyms found during Step 1
- Step 3. Evaluate DWPI and INPAFAMDB results and display records of interest in full
- Step 4. In **INPAFAMDB** analyze any results of interest using ICO to see how the hypnotics/sedatives are formulated

Analyze results of interest using ICO to see how the hypnotics/sedatives are formulated

=> S L17 OR L19

L21 422 L17 OR L19

Combine results
(see slide 60).

=> S L21 AND (A61K0009-48A/EPC OR K61K0009-48A)

L22 26 L21 AND (A61K0009-48A/EPC OR K61K0009:

ECLA and ICO for capsules providing:
1) immediate release
2) extended release

=> ANALYZE L22 1- ICO

L23 ANALYZE L22 1- ICO : 21 TERMS

=> D ICO TOP 4 DOC

L23 ANALYZE L22 1- ICO : 21 TER

TERM #	# OCC	# DOC	% DOC	ICO
1	23	4	15.38	K61K0009:20H6F2
2	23	3	11.54	K61K0009:50H6B
3	22	3	11.54	K61K0009:28H6B2
4	12	3	11.54	K61K0009:50H6F2

K61K9/28H NT10
TI: Coating materials
K61K9/28H6 NT11
TI: Organic macromolecular compounds
K61K9/28H6B NT12
TI: obtained by reactions only involving carbon-to-carbon unsaturated bonds
K61K9/28H6B2 NT13
TI: (Meth-)acrylic acid; Derivatives thereof

=> S L22 AND K61K0009:28H6B2/ICO

L24 3 L22 AND K61K0009:28H6B2/ICO

Check the ICO analysis by reviewing one of the references

=> D L24 BRIEF 2

L24 ANSWER 2 OF 3 INPAFAMDB COPYRIGHT 2008 EPO/FIZ KA on STN
AN 9266413 INPAFAMDB UPFB 20080724 UWF 200830
TI MODIFIED RELEASE COMPOSITION COMPRISING A SHORT-ACTING HYPNOTIC FOR
TREATMENT OF SLEEP DISORDERS.
INS CODD JANET; WILSON ALISON; CLANCY MAURICE; O'HANLON MELANIE
PAS ELAN PHARM INC
IPCI A61K0009-52 [I,A]; A61K0031-519 [I,A]; . . .
IPCR A61K0009-16 [I,A]; A61K0009-20 [N,A]; . . .
EPC A61K0009-16K2; A61K0009-48A; A61K0009-50K2; A61K0009-50M; . . .
AB (US 20050038042 A1)

A pharmaceutical composition comprising a short-acting hypnotic or a pharmaceutically acceptable salt thereof; a second component comprising the at least one particle comprises a core and at least one coating over the core, the core comprising a short-acting hypnotic or a pharmaceutically acceptable salt thereof, and the at least one coating comprising at least one pharmaceutically acceptable polymer that is soluble at a pH greater than or equal to about 5.5, . . . Methods of treating sleep disorders, prolonging sleep, and inducing sleep using these compositions are also disclosed.
. . . .

A "polymer" is mentioned in the abstract, but "(meth-)acrylic acid" is not described.

pharmaceutically acceptable polymer

Check ICO analysis by reviewing one of the references (cont.)

=> D L24 BRIEF 2 (cont.)

. . . .

PATENT FAMILY INFORMATION INPAFAMDB

+----- PUBLICATIONS -----+

AU 2003291715	A1 20040615
CN 1738608	A 20060222
CN 101156855	A 20080409
EP 1562560	A1 20050817
JP 2006512324	T 20060413
RU 2005119303	A 20060127
US 20050038042	A1 20050217
WO 2004045589	A1 20040603

+----- APPLICATIONS -----+

AU 2003-291715	A 20031114
CN 2003-80108775	A 20031114
CN 2007-10102840	A 20031114
EP 2003-768607	A 20031114
JP 2004-553507	T 20031114
RU 2005-119303	A 20031114
US 2003-704633	A 20031112
WO 2003-US35046	W 20031114

+----- PRIORITIES -----+

US 2002-426369P	P 20021115
US 2003-704633	A 20031112
WO 2003-US35046	W 20031114

3 priorities, 8 applications, 8 publications

Look deeper into the full-text of the reference, US 20050038042

=> FILE USPATFULL

=> S US 20050038042/PN AND (METHACRYLIC OR ACRYLIC)

L25 1 US 20050038042/PN AND (METHACRYLIC OR ACRYLIC)

=> D DETD

L25 ANSWER 1 OF 1 USPATFULL on STN

DETD [0042] The term "short-acting hypnotic compounds capable of inducing sedative

[0052] The term "modified release" as which is not immediate release and end sustained release and delayed release

[0063] Methacrylic acid co-polymers EUDRAGIT.TM. L (Rohm Pharma) are part the controlled release formulations of polymers are gastro resistant and ent

The ICO codes offer insight into how the extended release formulations are prepared.

K61K9/28H NT10

TI: Coating materials

K61K9/28H6 NT11

TI: Organic macromolecular compounds

K61K9/28H6B NT12

TI: obtained by reactions only involving carbon-to-carbon unsaturated bonds

K61K9/28H6B2 NT13

TI: (Meth-)acrylic acid; Derivatives thereof

ble in pure wa e soluble is e the content of carboxylic acid monomer used RAGIT.TM. S and EUDRAGIT.TM. L can be used individually in the polymer coating or in combination...

ECLA classifications (/EPC) are assigned by the European Patent Office (EPO)

- Maintained by EPO and continuously updated
 - Based heavily on IPC4
 - Twice as large as IPC8-Advanced
 - Hierarchical and non-expressive system
 - ICO classes provide additional information
 - Includes non-claim information
- Definitions available
 - ECLA + ICO PDF files in INPAFAMDB file banner
 - <http://v3.espacenet.com/eclarsh>
- Available on STN in DWPI, INPAFAMDB, RDISCLOSURE, and CAplus

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The Art of ECLA

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