



# NOT in Detail How to Use the NOT Operator in Keyword Searches

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# Agenda

- The NOT operator for subtracting answer sets
- The NOT operator in a keyword search – Use cautiously!
- The (NOTA) as negative counterpart for (A)
- Summary: available NOT proximity operators



# The NOT operator for subtracting answer sets

=> **FIL WPINDEX**

=> **S BIODEGRADABL? (2W) POLYMER**

L1            11365

=> **S ?DEGRADABL? (2W) POLYMER**

L2            13773

=> **S L2 NOT L1**

L3            2408

=> **D 1-10 KWIC=2**

... micro-needle is **bio-degradable**, drug-loaded **polymer** material low-temperature ...

... of leak-proof **non-degradable polymer** material, the ...

... is a **degradable polymer** material comprises ...

... is an **ion-degradable polymer** material with ...

... is a **degradable polymer** selected from ...

...

The NOT operator is very helpful in developing search strategies: NOT subtracts one answer set from another answer set, allowing efficient analysis of the changes made to a query.

# The NOT operator in a keyword search – Use cautiously!

=> **FIL WPINDEX**

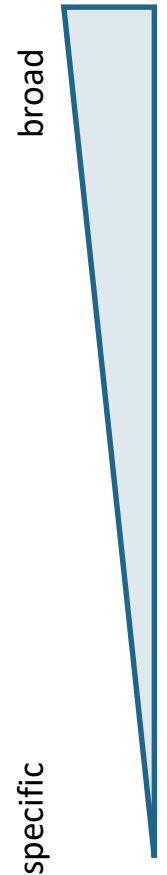
=> **S (NITRIC OXID#) AND CATALYST NOT PLATINUM**

L1            3125

The NOT operator removes any document with PLATINUM. Thus, the document below – highly relevant – is not part of L1!

AN    2012-D46986 [201227]    WPINDEX Full-text  
TI    New nitric oxide oxidation catalyst metal complex useful in an engine exhaust system  
AB    WO 2012037526 A2    UPAB: 20120425  
      NOVELTY - Nitric oxide oxidation catalyst metal complex (I) is new.  
      DETAILED DESCRIPTION - Nitric oxide oxidation catalyst metal complex of formula (A<sub>2</sub>B<sub>12</sub>C<sub>1x0(5+y)</sub>) (I) is new.  
      A = metallic element comprising elements from alkali metals, alkaline earth metals or lanthanide series;  
      ...  
      USE - (I) is useful in an engine exhaust system (claimed).  
      ADVANTAGE - (I): can be applied to a selected brick, zone or layer in a multi-brick, multi-zoned or multi-layered emission control systems and provides a boost in oxidation performance of the overall system and/or cost reduction; and does not include a precious metal comprising platinum or palladium, thus provides a lower cost alternative to precious metal oxidation catalysts, and provides similar level of nitric oxide oxidation performance. ...

# Overview: Boolean and proximity operators in text fields<sup>1,2</sup>



	DWPI	INPADOC	Fulltext (Multi-level)	Caplus	BioMed	Engineering
<b>OR</b>	A record must include <b>at least one search term</b>					
<b>AND</b>	A record must include <b>both search terms</b> , in any order					
<b>(L)</b>	(L){INVENTION (L){Publication 1 (L){Publication 2 ⋮	(L){Publication 1 (L){Publication 2 ⋮	(L){Publication 1 (L){Publication 2 ⋮	Two terms occur in the same field	Two terms occur in the same field	Two terms occur in the same field
<b>(P)</b>	Two terms occur in the same field or AB subfield (NOV..)	Two terms occur in the same field	Two terms occur in the same field	For patent family tabular data	-	-
<b>(S)</b>	Two terms occur in same paragraph	- (see file specific help)	Two terms occur in same paragraph	Two terms occur in same sentence or IT-field	Two terms occur in same sentence	- (see file specific help)
<b>(A)</b>	Search terms are <b>adjacent</b> to each other in <b>any order</b>					
<b>(W)</b>	Search terms are <b>adjacent to each other in the order specified</b>					
<b>(T)</b>	Search terms occur <b>in the same term</b>					
<b>NOT</b>	A record must include the first term <b>but not the second term</b>					

<sup>1)</sup> The meaning in individual databases can be different!

<sup>2)</sup> More information on proximity operators: Recorded e-seminar on [STN-INTERNATIONAL.COM](http://STN-INTERNATIONAL.COM)

# Refresher: The (A) proximity operator

- The **(A)** operator is used to search for terms that are **adjacent to each other in any order**.
- The **(nA)** operator is used to search for terms, which are adjacent in any order **with n or less terms in between**:

Search query:                   => S **FIRSTTERM** (3A) **SECONDTERM**

Example hit 1:                   ■ **FIRSTTERM** ■ **SECONDTERM** ■

Example hit 2:                   ■ **SECONDTERM** ■ ■ ■ **FIRSTTERM** ■



Terms must be adjacent but in any order  
with 3 or fewer intervening terms.

# The negative counterpart of (A) is (NOTA)

- The **(NOTA)** proximity operator is used to search for documents where **a term occurs without the second term adjacent the first term**:

*Search query:*                   => S **FIRSTTERM** (NOTA) **SECONDTERM**

*Not retrieved 1:*                   ■ **FIRSTTERM** **SECONDTERM** ■



*Not retrieved 2:*                   ■ **SECONDTERM** **FIRSTTERM** ■



# The negative counterpart of (A) is (NOTA)

- The **(NOTA)** proximity operator is used to search for documents where **a term occurs without the second term adjacent the first term**:

Search query:                   => S **FIRSTTERM** (NOTA) **SECONDTERM**

Not retrieved 1:               ■ **FIRSTTERM** **SECONDTERM** ■



Not retrieved 2:               ■ **SECONDTERM** **FIRSTTERM** ■



Example hit 1:                 ■ **FIRSTTERM** ■ **SECONDTERM** ■



Example hit 2:                 ■ **SECONDTERM** ■ ■ ■ ■ **FIRSTTERM** ■



} Only **FIRSTTERM** is highlighted



# Building sophisticated search queries with (NOTA)

*Search query:*

=> **S FIRSTTERM (NOTA) SECONDTERM**



# Building sophisticated search queries with (NOTA)

Search query:           => **S FIRSTTERM (NOTA) SECONDTERM**

Example hit:

████ **FIRSTTERM SECONDTERM** ████ ██████████  
██████ ███ ██████████ ██████████ ██████████ ██████████ ██████████ ██████████  
██ ██████████ **FIRSTTERM** ██████████ ██████████ ██████████ ██████████



The first occurrence of FIRSTTERM does not return the record.  
The second occurrence of FIRSTTERM returns the record.  
In the retrieved record, the first occurrence of FIRSTTERM is not highlighted and the second occurrence of FIRSTTERM is highlighted. To highlight both, run S Lx AND FIRSTTERM.

The search query FIRSTTERM (NOTA) SECONDTERM does not prevent retrieval of a document containing "...FIRSTTERM SECONDTERM..." as long as FIRSTTERM is also present in the document without SECONDTERM adjacent to the FIRSTTERM.

# Case 1: (NOTA) allows more precise retrieval

=> **FIL WPIINDEX**

=> **S INTERFERON (NOTA) GAMMA**

L1            21908

=> **S INTERFERON**

L2            26471

=> **S INTERFERON (A) GAMMA**

L3            7626

=> **S L2 NOT L3**

L4            18845

Records in which INTERFERON occurs without GAMMA are retrieved.

*With (NOTA) you exclude all records where INTERFERON occurs **only** together with GAMMA*

All records with INTERFERON adjacent to GAMMA are removed

# Case 2: (NOTA) to remove false positives

=> **FIL WPINDEX**

=> **S NITRIC OXIDE SYNTHASE**

L1            3297

... enzyme (IDO) and **nitric oxide synthase** (iNOS). The serum-free. . .

... Inducible **nitric oxide synthase** inhibitor;

... IC50 of **nitric oxide synthase** inhibitor

=> **S (NITRIC OXIDE SYNTHASE) (3NOTA) INHIBITOR**

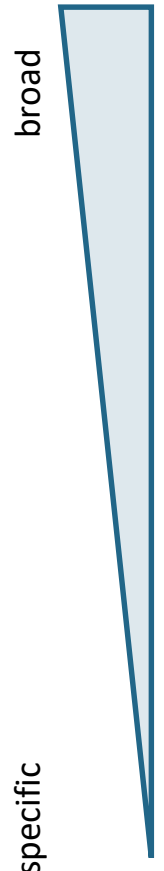
L2            2340

... (IGF-1), inducible **nitric oxide synthase** (iNOS), and arginase

... family, cyclooxygenases or **nitric oxide synthases**. The metalloenzyme is

... reducing content of **nitric oxide synthase**, content of calcitonin

# Proximity operators and their negative counterparts



	OR	
	AND	
(L)	<b>(NOTL)</b>	varies from file to file.
(P)	<b>(NOTP)</b>	varies from file to file.
(S)	<b>(NOTS)</b>	varies from file to file.
(A)	<b>(NOTA)</b>	works the same in all files.
(W)	<b>(NOTW)</b>	works the same in all files.
(T)	<b>(NOTT)</b>	searches within or across terms in files that support SLART <sup>1</sup> .
	<b>NOT</b>	

<sup>1</sup>) Type HELP (x) or HELP (NOTx) for file specific information.

<sup>2</sup>) SLART - Simultaneous Left and Right Truncation

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