

İlaç İsimleri ve Kimyasal Adlandırma Kuralları

Doç. Dr. Mehmet ALP

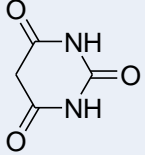
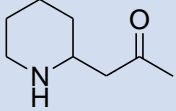
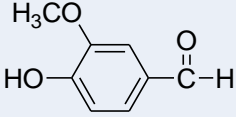
Farmasötik Kimya Anabilim Dalı

Organik Bileşikleri İsimlendirme Yöntemleri

1. Özel isimler (Common name, Trivial name)

Özel isimler, kimyasal bileşikleri tanımlamak için çoğu zaman bilimsel bir esasa ya da kurala dayanmadan verilen isimlerdir.

Bazı bileşiklerin isimleri, elde edildiği kaynaktan, isim verilecek maddenin görünüş, renk, koku, tat gibi fiziksel özelliklerinden ya da insan isimlerinden esinlenerek verilmiştir.

Formül	İsim	İsmin alındığı kaynak
HCOOH	Formik asit	Lat. formica:karınca
CH ₃ COOH	Asetik asit	Lat. acetum:sirke
NH ₂ CONH ₂	Üre	Lat. urina:idrar
	Barbitürik asit	Barbara
	Pelletierin	Joseph Pelletier Fransız kimyacı
	Vanilin	<i>Vanilla planifolia</i> : vanilya bitkisi

2. Jenerik isim

İlaç olarak kullanılan bir kimyasal maddenin (ilaç etkin maddesinin) herhangi bir ülkede resmi kuruluşlarca kabul edilen ve o ülkenin farmakopesinde yer alan ismi, o ülkedeki resmi isimdir.

Omeprazol, parasetamol, ibuprofen.

3. Ticari isimler

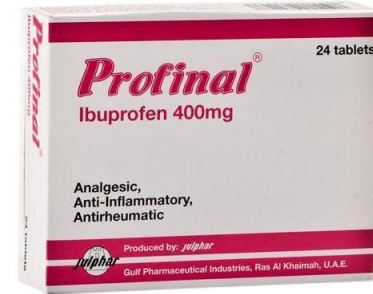
(Trademark:™ , Registered name:®)

Ekonomik deęeri olan kimyasal maddelere ve bunların ürünlerine uluslararası ya da akademik çevrelerde kullanılan isimlerden başka bu maddeleri geliřtiren firmalar tarafından da özel isimler verilebilir.

Ticari isim denilen bu isimlerin kullanım hakkı, resmi kurumlara tescil ettirildikleri taktirde, söz konusu firmaya aittir.

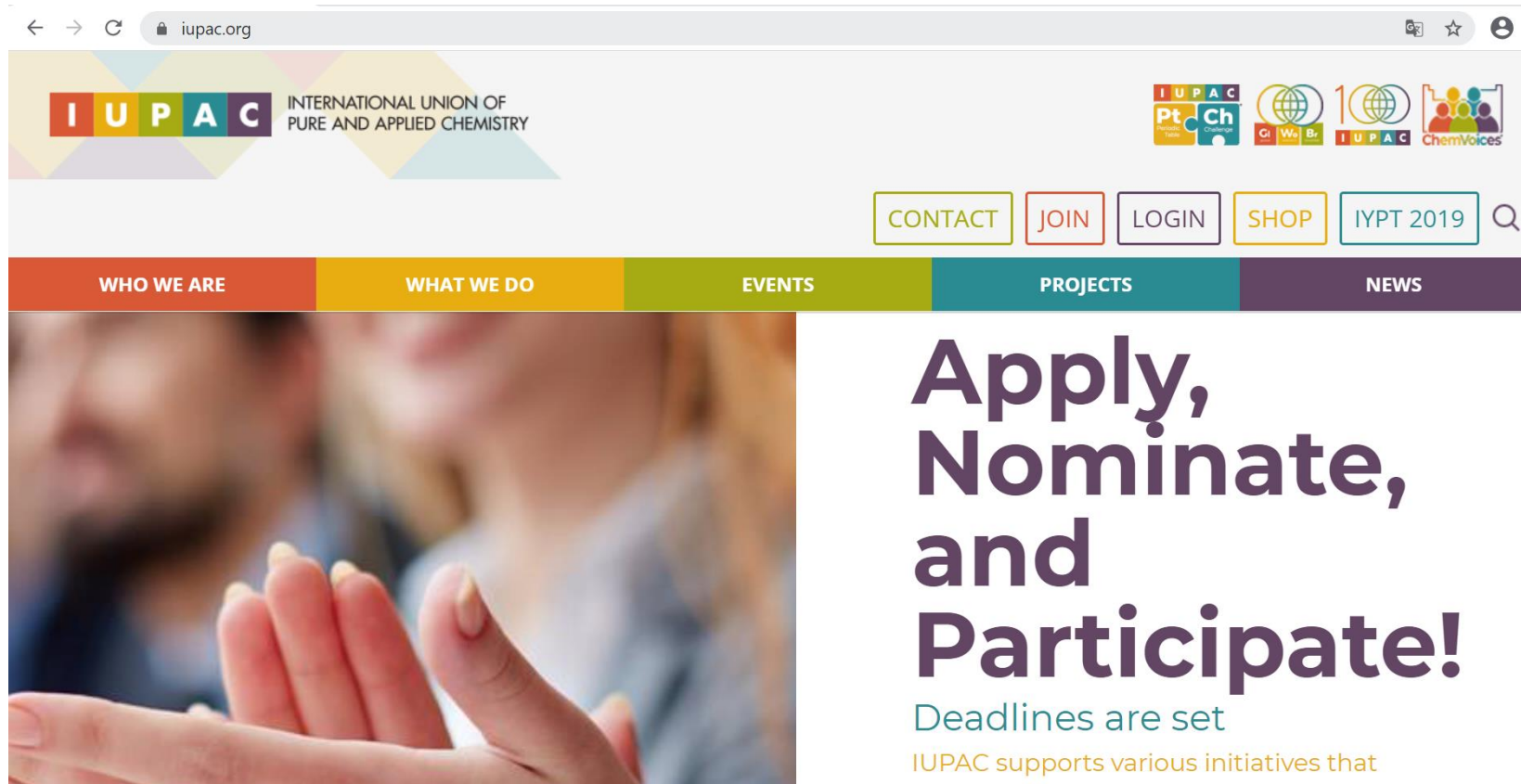
Aynı kimyasal madde veya bundan üretilen ürünlere, birden fazla firma tarafından verilmiş ve tescil ettirilmiş farklı ticari isimler olabilir.

İlaç etkin maddesi olarak ibuprofen içeren ilaçlar; Brufen[®], Artril[®], Profinal[®].



4. Sistematik İsimlendirme

IUPAC: International Union of Pure and Applied Chemistry
(Uluslararası Kuramsal ve Uygulamalı Kimya Birliđi)



The screenshot shows the IUPAC website homepage. At the top left is the IUPAC logo with the text "INTERNATIONAL UNION OF PURE AND APPLIED CHEMISTRY". To the right are logos for Pt, Ch, Cl, We, Br, IUPAC, and ChemVoices. Below these are navigation buttons: CONTACT, JOIN, LOGIN, SHOP, and IYPT 2019. A search icon is also present. A horizontal menu bar contains: WHO WE ARE, WHAT WE DO, EVENTS, PROJECTS, and NEWS. The main content area features a large image of hands being held up, with the text "Apply, Nominate, and Participate!" in large purple font. Below this, it says "Deadlines are set" in teal and "IUPAC supports various initiatives that" in orange.

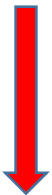
IUPAC Adlandırma Kuralları

1. Bileşikteki ana yapı belirlenir. Bu yapı dışındaki gruplara **yan zincir** ya da **sübstitüent** denir.
2. Bileşikteki fonksiyonel gruplar ve sübstitüentler belirlenir.
3. Ana yapı fonksiyonel gruplar ve sübstitüentlere en düşük numaralar verilecek şekilde numaralandırılır.
4. Fonksiyonel grubu ifade etmek için ana yapıya gerekli olan **ön ek** ya da **son ek** getirilir.

Karbon Sayısı	Adı	Kapalı Formülü	Yapı Formülü
1	Metan	C_1H_4	CH_4
2	Etan	C_2H_6	CH_3CH_3
3	Propan	C_3H_8	$CH_3CH_2CH_3$
4	Butan	C_4H_{10}	$CH_3(CH_2)_2CH_3$
5	Pentan	C_5H_{12}	$CH_3(CH_2)_3CH_3$
6	Heksan	C_6H_{14}	$CH_3(CH_2)_4CH_3$
7	Heptan	C_7H_{16}	$CH_3(CH_2)_5CH_3$
8	Oktan	C_8H_{18}	$CH_3(CH_2)_6CH_3$
9	Nonan	C_9H_{20}	$CH_3(CH_2)_7CH_3$
10	Dekan	$C_{10}H_{22}$	$CH_3(CH_2)_8CH_3$
11	Undekan	$C_{11}H_{24}$	$CH_3(CH_2)_9CH_3$
12	Dodekan	$C_{12}H_{26}$	$CH_3(CH_2)_{10}CH_3$
13	Tridekan	$C_{13}H_{28}$	$CH_3(CH_2)_{11}CH_3$
20	Eikozan	$C_{20}H_{42}$	$CH_3(CH_2)_{18}CH_3$

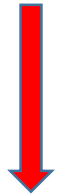
Fonksiyonlu gruplar ve öncelik sırası - 1

Madde sınıfı	Formül	Son ek	Ön ek
Karboksilik asitler	$\begin{array}{c} \text{O} \\ \parallel \\ -\text{C}-\text{OH} \end{array}$	-oik asit	karboksi
Karboksilik asit anhidriti	$\begin{array}{c} \text{O} \quad \text{O} \\ \parallel \quad \parallel \\ -\text{C}-\text{O}-\text{C}- \end{array}$	-oik anhidrit	-
Karboksilik asit esteri	$\begin{array}{c} \text{O} \\ \parallel \\ -\text{C}-\text{O}-\text{R} \end{array}$	<i>alkil</i> -oat	<i>alkoksi</i> karbonil
Karboksilik asit halojenür	$\begin{array}{c} \text{O} \\ \parallel \\ -\text{C}-\text{X} \end{array}$	-oil halojenür	
Karboksilik amid	$\begin{array}{c} \text{O} \\ \parallel \\ -\text{C}-\text{NH}_2 \end{array}$	-oik amid	karbamoil
Nitril türevleri	$-\text{C}\equiv\text{N}$	nitril, onitril	siyano



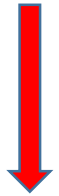
Fonksiyonlu gruplar ve öncelik sırası - 2

Madde sınıfı	Formül	Son ek	Ön ek
Aldehitler	$\begin{array}{c} \text{O} \\ \\ -\text{CH} \end{array}$	-al	formil
Ketonlar	$\begin{array}{c} \text{O} \\ \\ -\text{C}-\text{R} \end{array}$	-on	okso, keto
Alkoller	$\begin{array}{c} \\ -\text{C}-\text{OH} \\ \end{array}$	-ol	hidroksi
Merkaptanlar	$\begin{array}{c} \\ -\text{C}-\text{SH} \\ \end{array}$	-tiyol	merkaptto
Aminler	$\begin{array}{c} \diagup \\ -\text{N} \\ \diagdown \end{array}$	-amin	amino
Eterler	-O-	eter	alkoksi
Sülfürler	-S-	sülfür	alkiltiyo



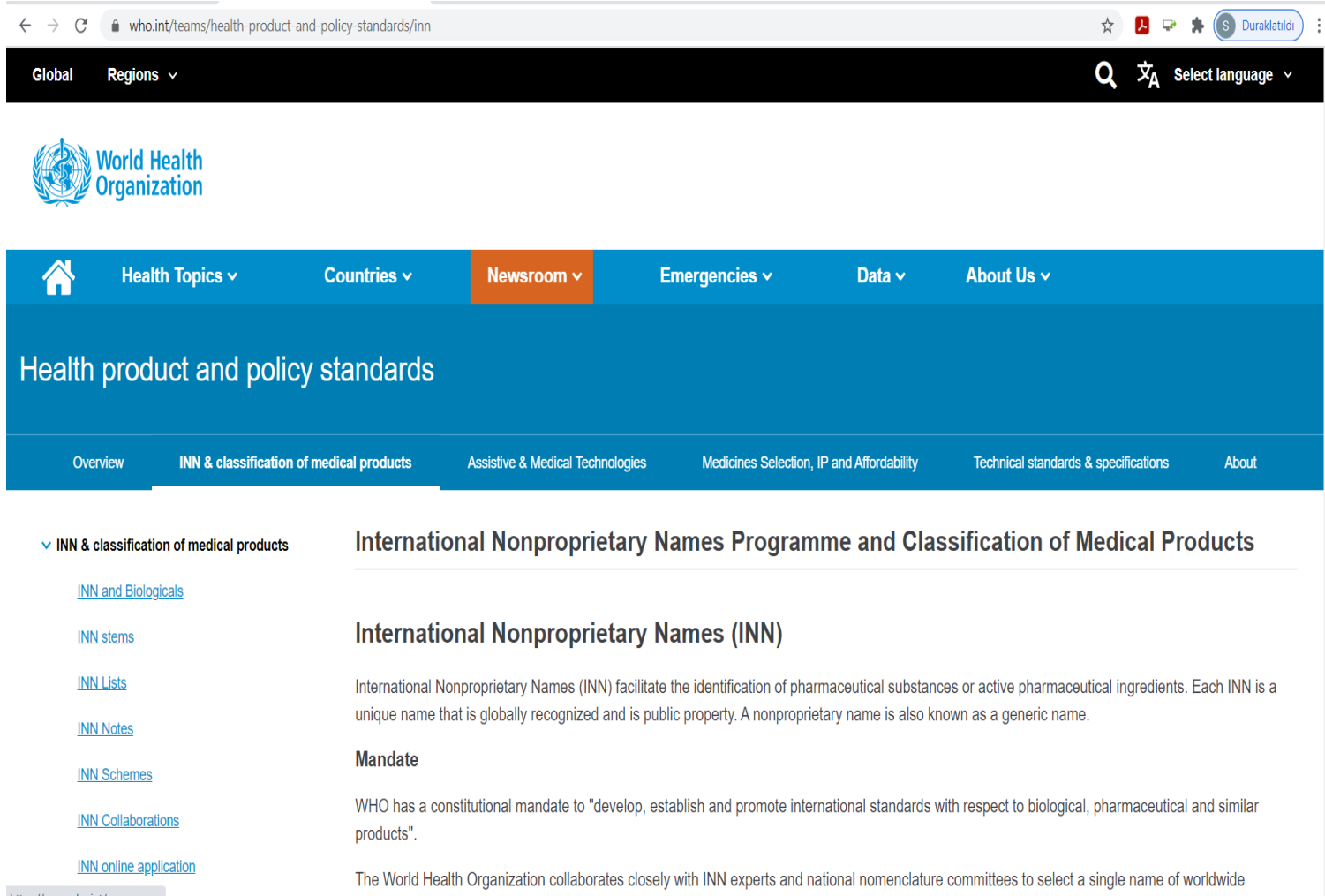
Fonksiyonlu gruplar ve öncelik sırası - 3

Madde sınıfı	Formül	Son ek	Ön ek
Alkenler	$\begin{array}{c} \diagdown \\ \text{C}=\text{C} \\ \diagup \end{array}$	-en	<i>alkenil</i>
Alkinler	$\text{—C}\equiv\text{C—}$	-in	<i>alkinil</i>
Halojenli türevler	$\begin{array}{c} \diagdown \\ \text{C}-\text{X} \\ \diagup \end{array}$	Halojenür (-F, -Cl, -Br, -I)	<i>Halo</i> (Floro-, Kloro-, Bromo-, İyodo-)
Nitrolu türevler	—NO_2	-	nitro
Alkanlar	$\begin{array}{c} \quad \\ \text{—C—C—} \\ \quad \end{array}$	-an	<i>alkil</i>



Azalan sıra

5. Uluslararası Ortak Ad (International Non-proprietary Names: INN)



The screenshot shows the WHO website page for International Nonproprietary Names (INN) and Classification of Medical Products. The page is in Turkish, as indicated by the browser's address bar and the 'Select language' dropdown menu. The page is titled 'Health product and policy standards' and is part of the 'Newsroom' section. The main content area is titled 'International Nonproprietary Names Programme and Classification of Medical Products' and includes a sub-section 'International Nonproprietary Names (INN)'. The text explains that INN facilitate the identification of pharmaceutical substances or active pharmaceutical ingredients and are globally recognized. It also mentions the WHO's mandate to develop international standards and the organization's collaboration with INN experts and national nomenclature committees.

who.int/teams/health-product-and-policy-standards/inn

Global Regions

World Health Organization

Health Topics Countries Newsroom Emergencies Data About Us

Health product and policy standards

Overview INN & classification of medical products Assistive & Medical Technologies Medicines Selection, IP and Affordability Technical standards & specifications About

INN & classification of medical products

[INN and Biologicals](#)

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[INN Schemes](#)

[INN Collaborations](#)

[INN online application](#)

International Nonproprietary Names Programme and Classification of Medical Products

International Nonproprietary Names (INN)

International Nonproprietary Names (INN) facilitate the identification of pharmaceutical substances or active pharmaceutical ingredients. Each INN is a unique name that is globally recognized and is public property. A nonproprietary name is also known as a generic name.

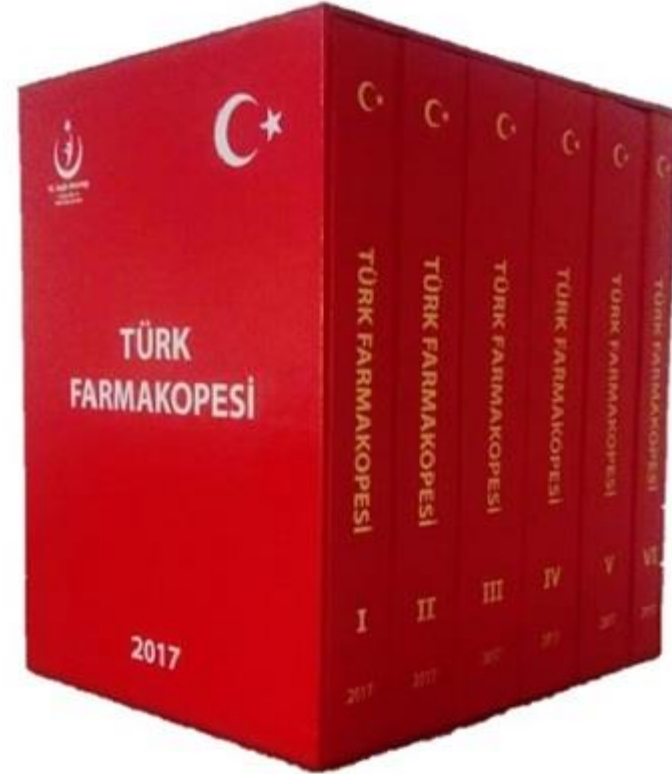
Mandate

WHO has a constitutional mandate to "develop, establish and promote international standards with respect to biological, pharmaceutical and similar products".

The World Health Organization collaborates closely with INN experts and national nomenclature committees to select a single name of worldwide

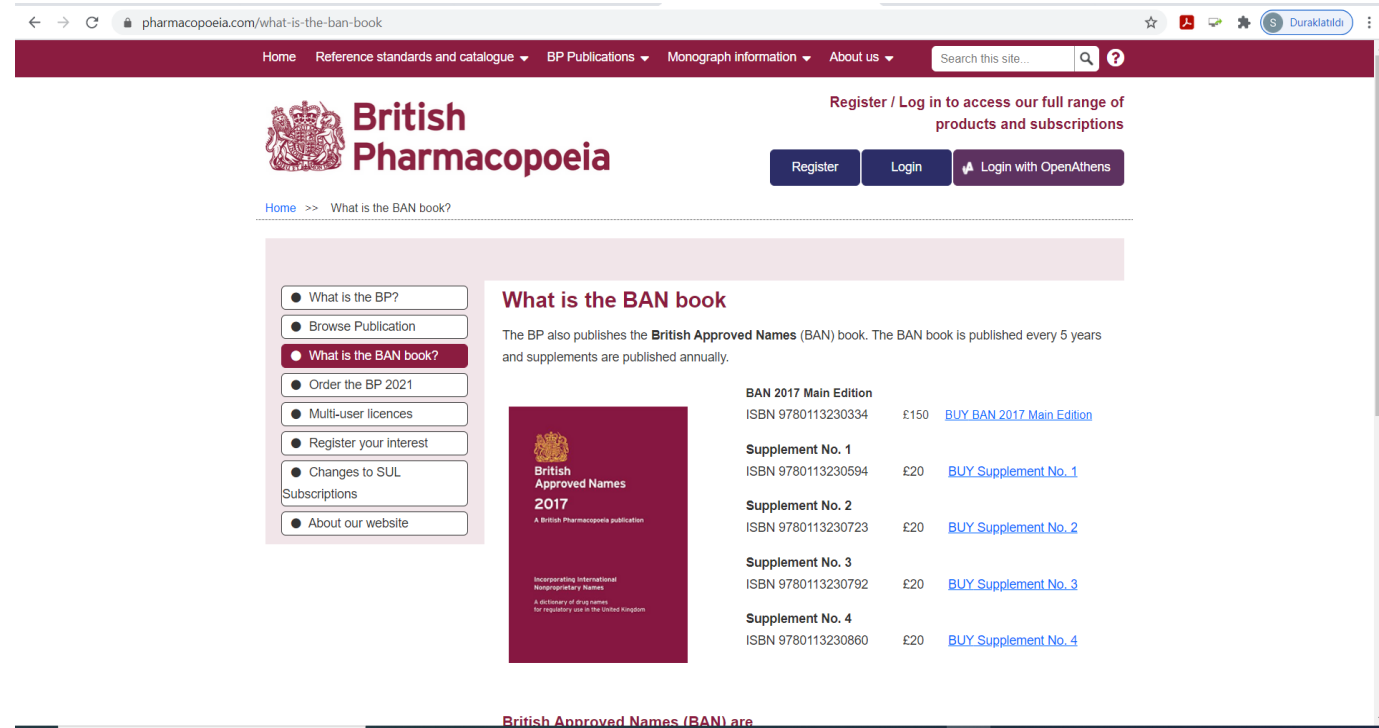
6. *Türk Farmakopesi (TF); Turkish Pharmacopoei: TP)*

Türk Farmakopesinde (TF) tanımlandığı şekliyle farmasötik bir maddeye verilen resmi, tescilli olmayan veya jenerik addır.



7. İngiliz Onaylı Ad (British Approved Name: BAN)

İngiliz Onaylı İsim (BAN), İngiliz Farmakopesinde (BP) tanımlandığı şekliyle farmasötik bir maddeye verilen resmi, tescilli olmayan veya jenerik addır.



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What is the BAN book

The BP also publishes the **British Approved Names (BAN)** book. The BAN book is published every 5 years and supplements are published annually.

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British Approved Names 2017
A British Pharmacopoeia publication

Incorporating International Nonproprietary Names
A dictionary of drug names for regulatory use in the United Kingdom

British Approved Names (BAN) are

8. Amerika Birleşik Devletleri Onaylı Adlarını (United States Approved Names: USAN)

The screenshot shows a web browser displaying the AMA website. The page title is "United States Adopted Names naming guidelines". The page content includes a definition of USAN, a list of links to PDF documents, and a section on brand name guidelines. A sidebar on the right promotes AMA membership with the text "Membership Moves Medicine™" and a "Join the AMA today" button.

ama-assn.org/about/united-states-adopted-names/united-states-adopted-names-naming-guidelines#:~:text=A%20United%20States%20Adopted%20Name,in%20the%20choice... Duraklatıldı

MENU AMA 100th Join Renew Enter Search Term Member Benefits Sign In

UNITED STATES ADOPTED NAMES

United States Adopted Names naming guidelines

f t in e

PRINT PAGE

By definition, nonproprietary names are entirely in the public domain and are not subject to trademark rights. A United States Adopted Name (USAN) is a nonproprietary name selected by the USAN Council to ensure safety, consistency and logic in the choice of names. These principles take into account the existence of trademarks, international harmonization of drug nomenclature, new classes of drugs and the fact that the intended uses of substances for which names are being selected may change.

- [How USAN works](#) (PDF)
- [INN process in relation to USAN process](#) (PDF)
- [How USAN publishes a name](#) (PDF)

Brand name and generic name guidelines for active ingredients

Unlike generic names, brand names vary from company to company and from country to country. In rare instances, a brand name may be used for 2 different active ingredients in different countries. More commonly, a company uses different brand names in different countries for the same drug, or 2 countries may market the same substance under different brand names. Finally, as part of "brand extension" business strategies, companies use the same brand name to refer to 2 different active ingredients.

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Kaynaklar

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2. Organik Kimya, Craig Fryhle, Graham Solomons, 7. Basımdan Çeviri, Literatür Yayıncılık, 2003.
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4. <https://www.pharmacopoeia.com/what-is-the-ban-book>
5. <https://www.ama-assn.org/about/united-states-adopted-names/united-states-adopted-names-naming-guidelines#:~:text=A%20United%20States%20Adopted%20Name,in%20the%20choice%20of%20names.>