

**ELEMENTI DI
FARMACOLOGIA**

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Original Web Site

**CONSERVAZIONE, STOCCAGGIO
E SMALTIMENTO DEI FARMACI**

OPERE FORMATIVE COMO CORSO ASA DISCIPLINA: ELEMENTI DI FARMACOLOGIA

THE PERIODIC TABLE OF ELEMENTS

H
Hydrogen 1
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 1.01

Li
Lithium 3
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 6.94

Na
Sodium 11
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 22.99

K
Potassium 19
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 39.10

Rb
Rubidium 37
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 85.47

Cs
Caesium 55
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 132.91

Fr
Francium 87
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 223

Be
Beryllium 4
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 9.01

Mg
Magnesium 12
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 24.31

Ca
Calcium 20
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 40.08

Sr
Strontium 38
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 87.62

Ba
Barium 56
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 137.33

Ra
Radium 88
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 226



Medicines for a Healthy Future

bp



RSC Advancing the Chemical Sciences



Chemical Industry Association

Ac
Actinium 89
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 227

Rf
Rutherfordium 104
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 261

Rg
Roentgenium 108
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 272

Th
Thorium 90
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 232.04

Pa
Protactinium 91
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 231.04

U
Uranium 92
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 238.03

Np
Neptunium 93
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 237.05

Pu
Plutonium 94
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 244.06

Am
Americium 95
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 243.06

Cm
Curium 96
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 247.07

Bk
Berkelium 97
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 247.07

Cf
Californium 98
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 251.08

Es
Einsteinium 99
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 252.08

Fm
Fermium 100
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 253.08

Mt
Meitnerium 109
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 268

Nb
Niobium 41
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 92.91

Mo
Molybdenum 42
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 95.94

Tc
Technetium 43
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 98

Ru
Ruthenium 44
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 101.07

Rh
Rhodium 45
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 102.91

Y
Yttrium 39
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 88.91

Zr
Zirconium 40
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 91.22

Nb
Niobium 41
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 92.91

Mo
Molybdenum 42
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 95.94

Tc
Technetium 43
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 98

Ru
Ruthenium 44
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 101.07

Rh
Rhodium 45
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 102.91

Pd
Palladium 46
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 106.42

Ag
Silver 47
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 107.87

Cd
Cadmium 48
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 112.41

In
Indium 49
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 114.82

Sn
Tin 50
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 118.71

Sb
Antimony 51
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 121.76

Te
Tellurium 52
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 127.60

I
Iodine 53
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 126.91

Xe
Xenon 54
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 131.29

Ba
Barium 56
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 137.33

La
Lanthanum 57
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 138.91

Hf
Hafnium 72
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 178.49

Ta
Tantalum 73
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 180.95

W
Tungsten 74
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 183.85

Re
Rhenium 75
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 186.21

Ca
Calcium 20
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 40.08

Sc
Scandium 21
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 44.96

Ti
Titanium 22
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 47.88

V
Vanadium 23
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 50.94

Cr
Chromium 24
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 52.00

Mn
Manganese 25
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 54.94

Fe
Iron 26
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 55.85

Co
Cobalt 27
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 58.93

Ni
Nickel 28
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 58.69

Cu
Copper 29
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 63.55

Zn
Zinc 30
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 65.38

Ga
Gallium 31
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 69.72

Ge
Germanium 32
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 72.64

As
Arsenic 33
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 74.92

Se
Selenium 34
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 78.96

Br
Bromine 35
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 79.90

Kr
Krypton 36
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 83.80

KEY

At room temperature the element is:

- Yellow** gas
- Red** liquid
- White** solid
- Green** man-made solid

Appearance in nature:

- Unshaded** only as compounds
- Shaded** free element
- Half-shaded** as the element and in compounds

Used as:

Calcium 20 (example)

name, atomic number, element (text in black), alloy blend or mixture (text in red), compound (text in dark blue), relative atomic mass (to 2 d.p.)

B
Boron 5
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 10.81

C
Carbon 6
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 12.01

N
Nitrogen 7
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 14.01

O
Oxygen 8
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 16.00

F
Fluorine 9
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 18.99

Ne
Neon 10
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 20.18

Al
Aluminium 13
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 26.98

Si
Silicon 14
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 28.09

P
Phosphorus 15
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 30.97

S
Sulfur 16
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 32.07

Cl
Chlorine 17
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 35.45

Ar
Argon 18
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 39.95

He
Helium 2
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 4.00

Ne
Neon 10
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 20.18

Ar
Argon 18
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 39.95

Kr
Krypton 36
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 83.80

Xe
Xenon 54
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 131.29

Rn
Radon 86
1. most abundant element
2. used for hydrogenation
3. used for ammonia synthesis
4. used for ammonia synthesis
A: 222

ALCUNI ELEMENTI CHIMICI IMPORTANTI:

- **Na** **SODIO**
- **K** **POTASSIO**
- **Ca** **CALCIO**
- **Mg** **MAGNESIO**

2.1. CENNI SUGLI ELEMENTI CHIMICI PRINCIPALMENTE USATI IN FARMACOLOGIA

SODIO CLORURO NaCl

POTASSIO CLORURO KCl

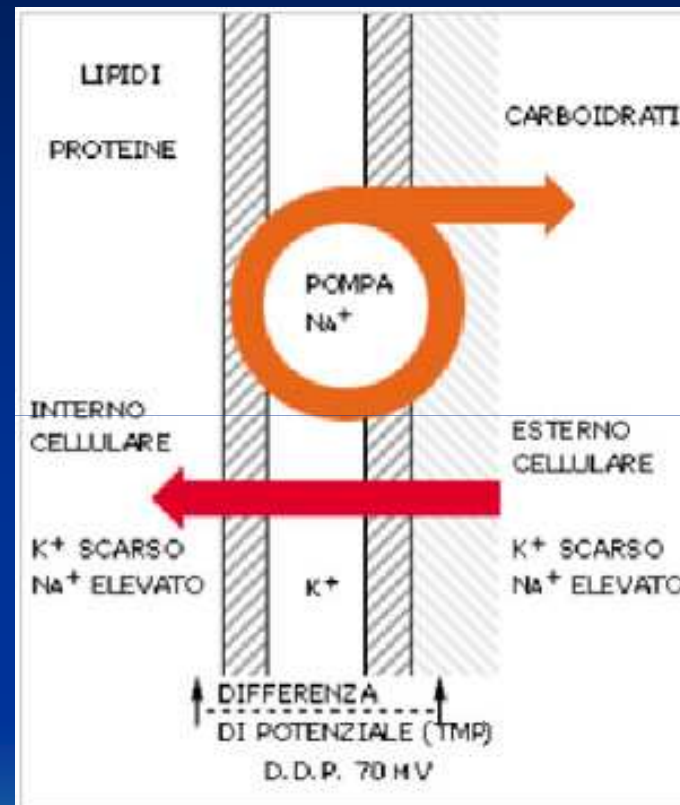
MAGNESIO SOLFATO MgSO_4

CALCIO CLORURO CaCl

SODIO BICARBONATO NaHCO_3

FORMA FARMACEUTICA: Fiala





ALTRI ELETTROLITI IN FLEBOCLISI

CRISTALLOIDI:

- **SODIO CLORURO NaCl (0,9 %)**
- **RINGER LATTATO**
- **ELETTROLITICA I / II / III**

GLUCOSIO (5% - 10%)

COLLOIDI:

- **VOLUVEN**
- **INFUPLAS**
- **EMAGEL**



MAGAZZINO PER LO STOCCAGGIO E LA CONSERVAZIONE



ARMADIO PER LA CONSERVAZIONE DEI FARMACI (SCORTA)



ARMADIO PER LA CONSERVAZIONE DEI FARMACI (SCORTA)

TERAPIA
SC e IM

TERAPIA EV

STUPEFACENTI
e KCl

TERAPIA
ANTIBIOTICA



TERAPIA
ORALE

TERAPIA
ORALE

TERAPIA EV

CARRELLO PER LA TERAPIA



TERAPIA
ORALE

SIRINGHE e
ALTRI PRESIDI

FLEBOCLISI



CARRELLO DELL'EMERGENZA



MONITOR DEFIBRILLATORE

GESTIONE VIE AEREE

FARMACI EMERGENZA

VENTILAZIONE E ALTRO
MATERIALE DI SCORTA

BOMBOLA OSSIGENO

TAVOLA PER RCP

I FARMACI DA FRIGORIFERO



**FARMACI
EMERGENZA**

SUPPOSTE



**TEMPERATURA
CONTROLLATA**

SIMBOLOGIA EN 980

ragione sociale e indirizzo del fabbricante		identificativo e descrizione (in più lingue) del dispositivo in questione con riferimento al numero di codice del catalogo in uso		codice a barre
marcatura CE (prodotto in conformità alla Dir. 93/42 CEE sui dispositivi medici classe IIA o IIB)		data di scadenza espressa in anno-mese		il prodotto deve essere mantenuto a temperatura indicata  
numero di lotto (preceduto dalla sigla LOT)		il prodotto è per solo uso professionale		il prodotto è monouso 
il prodotto deve essere mantenuto in luogo asciutto		il prodotto contiene Nichel e Cromo: può provocare una reazione allergica		tenere al riparo dalla luce 
marcatura CE (prodotto in conformità alla Dir. 93/42 CEE sui dispositivi medici classe I)		consultare le istruzioni per l'uso allegate		il prodotto è sterilizzato a raggi gamma 
titanio		acciaio di tipo chirurgico		il prodotto contiene Cromo: può provocare una reazione allergica 
sterilizzabile in autoclave alla temperatura indicata		non sterile		contiene o è presente lattice di gomma naturale 

ALTRA SIMBOLOGIA



Marchio CE: talvolta seguito dal numero identificativo dell'ente certificatore



Sterilizzazione per irraggiamento



Fragile

REF

Codice prodotto



Sterilizzazione in autoclave



Riciclabile



N. del lotto di produzione



Sterilizzazione con ossido di etilene



Alto



Utilizzare entro, data di scadenza



Proteggere dalla luce diretta del sole (può riportare un'indicazione di temperatura)

SN

Numero di serie



Monouso (non riutilizzabile)



Proteggere da qualsiasi fonte luminosa



data di produzione



Prima dell'uso leggere le istruzioni



Temperatura di conservazione



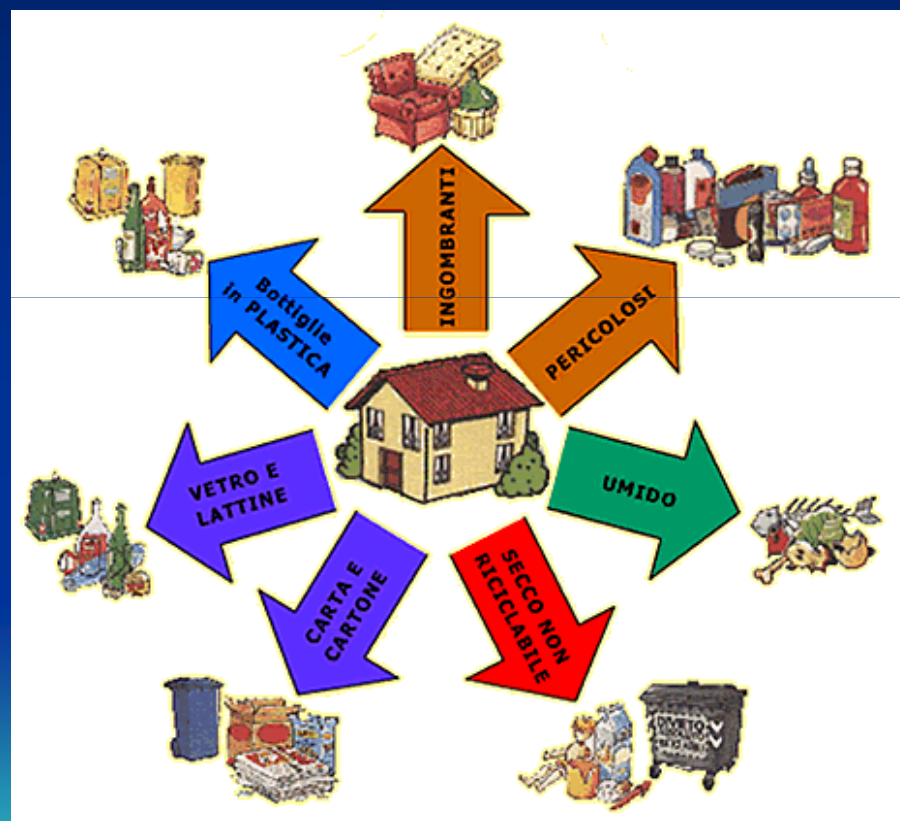
SMALTIMENTO DEI FARMACI E DEI PRESIDI MONOPAZIENTE e MONOUSO

TAGLIENTI



QUALSIASI RIFIUTO
POTENZIALMENTE INFETTO

ED IL RESTO?





PROSSIMA LEZIONE: LA REGOLA DELLE 6 G