

- **CAPSULE NO & THEIR APPROXIMATE CAPACITY IN mg & ml**

000 - 950 - 1.37

00 - 650 - 0.95

0 - 450 - 0.68

1 - 300 - 0.50

2 - 250 - 0.37

3 - 200 - 0.30

4 - 150 - 0.21

5 - 100 - 0.13

PROPORTIONS REQUIRED FOR A PRIMARY EMULSION

(oil:water:gum)

Fixed oils :- 4:2:1

Volatile oils:- 2:2:1

Mineral oils:- 3:2:1

Oleoresins:- 1:2:1

CODE: **LPSO** (apply this for tweens & spans)

for eg .. spans 20 mean sorbitan mono laurate

tween 80 mean Polyoxyethylene sorbitan monooleate

L : Laurate - 20

P : Palmitate - 40

S : Stearate - 60

O : Oleate - 80

SOLUBILITY

DESCRIPTIVE TERM - APPROX VOL OF SOLVENT IN ml/gm OF SOLUTE

Very soluble - less than 1

Freely soluble - 1 - 10

Soluble - 10 - 30

Sparingly soluble - 30 - 100

Slightly soluble - 100 - 1000

Very slightly soluble - 1000 - 10,000

Practically insoluble - more than 10,000

STORAGE TEMPERATURE

Cold - 2 - 8 degree centi

Cool - 8 - 25

Room - temp prevailing in the working area

Warm - between 30 - 40

Excessive heat - > 40 degree

SUCROSE BASED DILUANTS

Dipac - 97 % sucrose + 3% modified dextrose

Nutab - 95 % sucrose + 4 % invert sugar

Sugar tab - 90 - 93 % sucrose + 7 - 10 % invert sugar

Compressibility index / carrs index = $\frac{\text{tapped density} - \text{bulk density}}{\text{tapped density}}$

hausners ratio = $\frac{\text{tapped density}}{\text{bulk density}}$

% CI	FLOW CHARACTER	HAUSNER RATIO
< or = 10	excellent	1 - 1.11
11 - 15	good	1.12 - 1.18
16 - 20	fair	1.19 - 1.25
21 - 25	passable	1.26 - 1.34

26 - 31	poor	1.35 - 1.45
32 - 37	very poor	1.46 - 1.59
>38	very very poor	> 1.6

ANGLE OF REPOSE

FLOW CHARACTER

25 - 30	-	Excellent
31 - 35	-	Good
36 - 40	-	Fair
41 - 45	-	Passable
46 - 55	-	poor
56 - 65	-	Very poor
>66	-	very very poor

Types of Glass used in Pharmaceutical Industries

Parenteral Use

Type I Glass:

Highly Resistant Borosilicate.

Used for Buffered and Unbuffered aqueous solution.

Type II Glas:

Highly Resistant Sodalime glass.

Buffered aqueous solution below pH 7.0

Type III Glass:

Moderately Resistant Sodalime glass.

Used for dry powder and oily solution.

Non-Parenteral Use

Type IV Glass:

General Purpose Sodalime glass.

Not for parenteral, for tablet, liquid oral and externals.

- **organic reactions imp for NIPER**

Name reactions – The Basis of Organic Chemistry

You will find the details of the mechanism in text books or the following web sites:

<http://www.organic-chemistry.org/frames.htm?http://www.organic-chemistry.org/namedreactions/> or

http://www.chemlin.de/chemistry/name_reactions.htm or

<http://www.tomchemie.de/Reaktionsmechanismen/reaktionsmechanismen.h...>

See More

- **Abbreviations**

Description of some Important Abbreviations:-

AAAS	American Association of Advancement of Science
AALAS	American Association for Laboratory Animal Science
AIDS	Acquired Immune Deficiency Syndrome
AIOPI	Association of Information Officers of the Pharmaceutical Industry
ALF	American Liberation Front
ANDA	Abbreviated New Drug Application
BEA	Breeding for Experimental Animals
BINAS	Biosafety Information Network and Advisory Service
BMA	British Medical Association
BMJ	British Medical Journal
BPC	Bulk Pharmaceutical Chemicals
BPI	British Pharmaceutical Index
BrAPP	British Association of Pharmaceutical Physicians
BUAV	British Union for the Abolition of Vivisection
CADD	Computer Aided Drug Design
CDC	Centre for Disease Control
CIOMS	Council for International Organisations of Medical Sciences
CPCSEA	Committee for Purpose of Control & Supervision of Experimental Animals
CPI	Consumer Price Index
CRA	Clinical Research Associate
CRC	Clinical Research Council
CRF	Case Report Form

CRN	Clinical Research Network
CRO	Contract Research Organisation
CSM	Committee on Safety of Medicines
CTA	Clinical Trial Authorisation (formerly the CTX, CTC, DDX)
CTC	Clinical Trial Certificate (Now CTA)
CTC	Clinical Trials Centre
CTD	Common Technical Document
CTD	Common Technical Document
CTX	Clinical Trial Exemption (Now CTA)
DRA	Drug Regulatory Affairs
DUMP	Disposal of Unwanted Medicines and Poisons
EFPIA	European Federation of Pharmaceutical Industries & Associations
EMA	European Medicine Agency
FDA	Food & Drug Administration
FIP	International Pharmaceutical Federations
GCP	Good Clinical Practices
GLP	Good Laboratory Practices
GMP	Good Manufacturing Practices
Gxp industry	Generic term for good practice requirements in the Pharmaceutical
HIS	Indian Health Services
HPLC	High Performance Liquid Chromatography
HRSA	Health Resources & Service Administration
IACUC	Institutional Animal Care and Use Committee

IAES	Institutional Animal Ethics Committee
ICDRA	International Conference for Drug Regulatory Authorities
ICH	International Conference on Harmonization of technical requirement for registration of pharmaceuticals
IIG	Inactive Ingredient Guide
IMP Products	Investigational Medicinal Products IMP - Investigational Medicinal Products
IMPD	Investigational Medicinal Product Dossier
INDA	Investigational New Drug Application
INN	International non-proprietary names (<i>for pharmaceutical substances</i>)
INTDIS	International Drug Information System - the previous WHO adverse reactions database
IPC	Indian Pharmaceutical Congress
IPGA	Indian Pharmacy Graduate Association
ISO	International Organization for Standardization
ISoP	International Society of Pharmacovigilance
ISPE	International Society for Pharmacoepidemiology
MedDRA	Medical Dictionary for Drug Regulatory Affairs
NAFDAC Nigeria	National Agency for Food and Drug Administration and Control,
NCPA	National Community of Pharmacist Association
NCPO	National Conference of Pharmaceutical Organisations
NDA	New Drug Application
NDMS	National Disaster Medical System
NME	New Molecule Entity

NSAID	Non-Steroidal Anti-Inflammatory Drug
OTC	Over-The-Counter
PDS	Pharmacoepidemiology and Drug Safety (journal)
PEM	Prescription Event Monitoring
PHRMA	Pharmaceutical Research and Manufacturers Association
PIL	Package Insert Leaflet
PMDA	Pharmaceuticals and Medical Devices Agency, Japan
PMS	Post-Marketing Surveillance
POM	Prescription Only Medicine
PSM	Procurement and Supply Management
PSUR	Periodic Safety Update Report
QA	Quality Assurance

QSM-WHO	Quality Assurance and Safety of Medicines (WHO)
R&D	Research and Development
RAPS	Regulatory Affairs Professionals Society
RCT	Randomised Clinical Trials
RDE	Remote Data Entry
RDS	Research Defence Society
REC	Research Ethics Committee
RGN	Registered General Nurse
RPSGB	Royal Pharmaceutical Society of Great Britain
RSM	Royal Society of Medicine
Rx	Prescription
SARS	Severe Acute Respiratory Syndrome
SCDM	Society for Clinical Data Management
SIDS	Sudden Infant Death Syndrome
SIGAR	Special Interest Group on Adverse Reactions
TGA	Therapeutic Goods Administration, Australia
TMF	Trial Master File
TUFAM	General Directorate of Pharmaceuticals and Pharmacy, Turkey
UDV	Unit Dose Vial
UKECA	United Kingdom Ethics Committee Authority
USP	United States Pharmacopoeia
WIPO	World Intellectual Patent Office

For more info visit us at:- www.pharmatestseries.com

- **NIPER 2011 PAPER**

Niper 2011 Paper

- 1) Plantago...seed,root,bark
- 2) Aegle marmelose family...Rutaceae,malvaceae
- 3) competitive inhibitor....increase substrate level
- 4) Short acting Drug....propofol,thiopental
- 5) Morphine discovered in...1804,1820
- 6) kaolin...hydrated Al silicate,hydrated Mg silicate
- 7) Controlled Drug delivery system which is used...HPMC,polymer,DCP
- 8) morphine...analgesic,anticonvulsant,both,none
- 9) Dry heat solution filling.....Dry heat sterilization,moist heat,aseptic filling
- 10) D-glyceraldehyde configuration...S,R,RS
- 11) D-threose,D-erythrose,L-threose related questions
- 12) erythrose and threose are???.....diastereoisomers,epimers,Enantiomers
- 13) Kaya skin clinic by company...ITC,
- 14) Indian institute of homeopathy??...Kolkata,Jaipur,Bombay
- 15) preterm delivery vch drug use??..Atosiban,sulprostone,oxytocin
- 16) Psoralea obtained from..Apigenin,Umbelliferone
- 17) Vch of following obtained from marine?????...pralidoxime,heparin,both,none

- 18) Heparin ant..Ans protamine sulphate
- 19) 8 hrs...40km/hr...60 km/hr....ans 400
- 20) S is taller than a, a is taller than b lyk ques
- 21) Wittig reaction...phosphorous
- 22) Cardiolide...butanone, butanedione, butanolides
- 23) Propranolol chemical name
- 24) Ehrlich reagent...P-dimethyl benzaldehyde
- 25) BCE; FGI:...
- 26) i-methyl benzoate..ii..phenyl acetate,,iii Acetophenone..IR range,,i=ii>iii,i>ii>iii
- 27) NH gives peak at..780,1100,3400
- 28) Stationary phase and mobile phase in RP chromatography..
- 29) Intracutaneous Max vol....0.01,0.1,0.2,1
- 30) BCCI memb
- 31) $FeCl_3$ +catechol colour....purple,red,green
- 32) Third generation sulphonamide used in diabetes...Repaglinide, Glimipride, metformin, phenformin
- 33) Endothelial cells present in..Blood, lung,
- 34) Which tissue has slowest equilibrium drug in blood...brain, fat, muscle, liver
- 35) Platelets obtained from?? Ans megakaryotes
- 36) H_2O and D_2O attack...Elimination, SN_2 , SN_1
- 37) Walden inversion.... SN_1 , SN_2 , E_1 , E_2
- 38) Blood pH..7.4
- 39) Crystalline structure related ques...

- 40) Vch method best suit to convert amorphous to crystalline....micronization,spray drying,any of above
- 41)emulsion measurement not by....electric charge,light scaterin,
- 42)DLVO theory...
- 43)microemulsion globule size...
- 44)beta galactosidase...SDS page...Band...2,1,,,1,2....11....22...
- 45)PCR sequence
- 46)vch of following is not diuretic???.triamterine.indapamide,furosemide
- 47)Vch f followinnot active??...Allene,biphenyl.meso tartaric,None...
- 48)Gossypol.....not chiral,restricted rotation..
- 49)Eucalyptos oil ctn...geraneol,1-8 cineole,
- 50)AU..Bz..Cy....ans DX
- 51)20student height 120,10 student height 100...Avg height ans 105
- 52)Sania mirza....
- 53)German company take over.teva,sanofi,Pfizer..
- 54)book..fatima...
- 55)WOF used in tretmnt of diarrohea...erythromycin,domperidone,cisapride nd one new drug
- 56)cycloaddition..dial alder reactn
- 57)thinamerin dehydrogenation produce....anthracene,naphthalene...
- 58)synthetic Ach better than natural Ach....due to slwer hydrolysis...
- 59)If increase dose f salbutamol,decrease actn by...downregulation,upregulatin...
- 60)vch is permeable..polystrene...
- 61)bond energy.....

- 62) Tymolectics??
- 63) Max absorption from cell memb....ionized form, unionized form...
- 64) WOF is not side effect of phenothiazine???
- 65) WOF is not hepatotoxic??..rifampicin,isoniazid,ethambutol,streptomycin
- 66) Inhibit Aminotransferase and 3OS....tetracycline,macrolide
- 67) Inhibitor of 50S....macrolide,tetracycline
- 68) synonym...Graphics
- 69) Pictorial
- 70) magnaminous
- 71) Rebate
- 72) WOF is antituberculosis drug???.Ethambutol..
- 73) Reliance take over vch airline?
- 74) Antinomycin D and Rifampicin related confusion ques
- 76) DNA polymerase having activity??...5' to 3', 3' to 5', 5' to 3' with exonuclease,
- 77) SP angle...180
- 78) sesquiterpene having isoprene unit,,ans 3
- 79) In chewable tablet vch is used?? Mannitol...
- 80) Mannitol used bcz..Ans negative heat of soln
- 81) CAP hydrolyze at pH....2.1..3.3...5.4....Ph independent
- 82) Anandamide....
- 83) Condensed tannin...Ans proanthocyanidin
- 84) Not sterilized by moist heat...taflon,polystyrene,polyethylene
- 85) leucopenia...decrease size of WBC,increase size of WBC

- 86) Estrogen higher level vch toxicity produce??...wiegth loss,thrombophlebitis...
- 87) exothermic reaction Enrgy f product....Less,more
- 88) Father f pharmacognosy..hippocrates
- 89) benzyme intermediate..
- 90) Organic cmpd+UV....electronic transition
- 91) Quantitativ estimation by..UV,IR,Mass,Nmr
- 92) St phase in cellulose chromatography...silica gel,water without OH.water with OH
- 94) PEG liposome....
- 95) WOF is wrong...aquacoat means enteric coatin
- 96) WOF is nt disacchrides....sucrose,maltose,lactose,glucopyranose
- 97) Glycolysis occur in...cytosol,mitochondia,nucleolus,nucleus
- WOF occur in mitochondria..steroid synthesis,fat synthesis,
- 98) feed back inhibitin...
- 99) composite family nd one source belong to....terpene,alkaloids,glycoside,tannis
- 100) IR activity seen...change in dipole moment...
- 101) 300 Mhz....c13 Nmr???.....75
- 102) Increse polarity..n to pi* transitn...bathochromic shift,hypsochromic shift...
- 103) WOF increase the QT interval...terfenadine nd other 3 option
- 104) WOF is action of diuretic..Urine formation,glucose formation,
- 105) Metabolite of hormone stored in...pancreas,adrenal medulla..
- 106) Bile is stored in...pancreas,gall blader,
- 107) Body Temp controlled by...hypothalamus...
- 108) Iregulation in moment due to.....cerebrum,cerebellu,

- 109)cardiac output/min calld.....cardiac cycle,cardiac output,force f contraction
- 110)most intense peak...Base peak...
- 111)Molar extinction coefficient Unit....
- 112)Acute amoebic dysentery vch drud used..metronidazole,chloroquine..
- 113)Flourouracil..ans inhibit thymidylate synthesis...
- 114)Folate deficiency by...methotraxate..
- 115)NSAIDS induced GITproblem handled by...mesoprostol
- 116)Insulin ph 5..hw to make longer actin insulin lyk dt ques...increase pH,lower pH
- 117)Longer actin penicillin...procain penicillin and other qption
- 118)WOF used as sorbent in tablet??.....MCC,silica,both,none
- 119)Acetylene value.....ans lower than alkene
- 120)free radical stability....
- 121)free radical str.....ans planar
- 122)str of twisted boat.....
- 123)Tartaric acid inactive bz.....internal plane f symmetry..
- 124)WOF is prodrug..sulindac,sulphasalazine,aspirin
- 125)WOF is induced in allergy...IgE
- 126)WOF is participate in complement sym...IgG,IgM,IgE,IgA
- 127)Disinfectant fluid.....ans Sch O
- 128)Vasaka leaf shape...ans lanceolate
- 129)glandular type,,fracture....
- 130)agaropectin made up f....galactose nd uronic acid,glucose nd uronic acid
- 131)Arhenious Eqn related ques

- 132) Handersn hechalbatch...pH
- 133) Inflammation of brain...Ans meningitis...
- 134) GABA..increase cl level
- 135) Stainin..WOF is true abt gram positive stain
- 136) Eculle method 4 ans volatile oil
- 137) Vulcanizin agent.....S,SO₂
- 138) IND full form
- 139) WOF is not product of dabur....meswak,glucose D,odorus
- 140) Colour added in vch step....syrup coatin
- 141) Interfacial tensn measured by..ostwald,brook field
- 142) vch is adultrant of saraca indica
- 143) tablet strength increaser by ques lyk dat.....MCC,lactose
- 144) Mg stearate added in vch step of wet granulation...durin granulation,aft granulation
- 145) GC principle...adsorption,partition,both
- 146) Na salt of sachrin used as....solublizin agent,bulkin gent,aweeatin agent
- 147) IV emulsion isotonic with,,NaCl,KCL
- 148) IP H₂O₂....20%,80% lyk ques
- 149) Arsenic test apparatus use??...nessler cylinder
- 150) Doctor without border smthin lyk ques
- 151) subsidy definition..
- 152) dideoxy nucleotide differ from deoxy nucleotide by.....less OH at 3rd carbon,More OH at 3rd carbon,lessH at 3rd carbon,more H at 3rd carbon
- 153) In m-RNA nucleotides are joined by...phosphodiester bonds,glycosidic bond,hydrogen bond

- 154) $V_d = X/C$ related ques., ans 5 L
- 155) WOF is strong base....dimethylaniline, Pyrole, aniline, Pyridine
- 156) Enteric coated takes time in 0.1 N HCl...60,120,180,45
- 157) WOF used in effervescent tablet...citric acid+Na bicarbonate.
- 158) Wet granulation vch is not used...Roler compactor, sigma blade mixer.
- 159) Contact angle related ques
- 160) Draves test,,ans wetting angle
- 161) Caffeine gives..ans murexide test
- 162) Meyer's reagent....
- 163) Rhem rhizome use.....purgative,carminative,
- 164) Meltin f DNA increase..adenine and guanine,adenine and thiamine,cytosine and thiamine,
- 165) Topotecan...natural,synthetic,
- 166) H.pyroli induced hyperacidenia treated by???
- 167) clonidine....Antihypertensive,
- 168) Daughter cells divided in...Prophase,Anaphase,telophase
- 169) Company acquire vch hospital???.
- 170) Cyanide 540 UV gives colour.....Blue,green,Red
- 171) PCI constituted by...central govt,state govt...
- 172) Carbopol....PVA,PVP
- 173) antioxidant with reducing Prop??...tocopherol,hydroxyurea
- 174) Preservative used in ophthalmic??benzal konium Cl
- 175) Pharmaceutical Rotation by...molecule,crystal,both,None..
- 176) Increase lipase level indicate vch organ functn test...

177)USP apparatus 2...ans Paddle..

178)Streptomycin side effect....ans vestibular disturbance

179)Podophylotoxin...lignan dvt....

180)str of ketone treated wth LiAlH₄

- **antidotes for some drugs**

Antidotes for some drugs:

1.Acetaminophen---NAC (N-acetyl-L-cysteine) dosage

2.Alcohols (ethylene glycol, methanol) ----IV ethanol, fomepizol (potent inhibitor of ADH)

3.Heparin---- protamine

4.Warfarin ---- vitamin k

5.Antidepressants

a. TCA's---- benzodiazepines, phenytoin, physostigmine

b. SSRI's-----cycloheptadine

6.Benzodiazepines---- flumazenil

7.Beta antagonists----- glucagon and epinephrine

8.Calcium antagonists-----calcium, glucagon, insuline & dextrose combination

9.Cocaine---- BZD's for seizures; labetalol for hypertension; Neuroleptics for psychosis.

10.Cyanide----amyl nitrite; sodium nitrite; sodium thio sulphate

11.Digoxin----- digibind

12.Electrolytes

a.Magnesium-----10%CaCl₂ temp to antagonize cardiac effects of Mg

b.Potassium-----10%CaCl₂ 10%; NaHCO₃(causes intracellular shift of pot);

glucose & Insulin (intracellular shift of pot.)

sodium polystyrene sulfonate (cationic exchange resin)

13.Iron----- deferoxamine (chelate iron)

14.Isoniazid-----pyridoxine (reverses INH induced seizures)

15.Lead----- Ca Disodium EDTA ; BAL (dimercaprol)

16.Lithium-----no effective treatment

17.Opiates-----naloxone; nalmefene

18.Organophosphates-----atro

pine; pralidoxamine

19.Salicylates-----activated charcoal

20.Theophylline-----charcoal; beta antagonists

- **SYNONYMS AND THEIR COMMON NAMES (for knowledge)**

SYNONYM - COMMON NAME

Rochelle salt - sodium potassium tartarate

Dakins solution - sodium hypochloride

Glaubers salt - sodium sulphate

Epsom salt - magnesium sulphate

china clay - heavy kaolin

Gypsum - calcium sulphate

Calomel - mercurous chloride

Soap clay - bentonite

French chalk - talc

Alum - potassium aluminium sulphate

Hypo - sodium thiosulphate

precipitated chalk - calcium carbonate

Slaked lime - calcium hydroxide

Bleaching powder - chlorinated lime

Burrows solution - aluminium acetate solution

laughing gas - nitrous oxide

Lugols solution - aqueous iodine solution

Iodine tincture - weak iodine solution

knock out drops - chloral hydrate

- **VACCINES**

- LIVE ATTENUATED:**

- measles

- mumps

- polio

- rubella

- typhoid

- varicella

- tuberculosis

- yellowfever

- INACTIVATED:**

rabies

influenza

tetanus

hepatitis A

RECOMBINANT:

hepatitis B

TOXOID:

diphtheria

tetanus

• **TEST ORGANISM FOR MICROBIOLOGICAL ASSAY OF ANTIBIOTICS**

ANTIBIOTIC - TEST ORGANISM

Amikacin - staphylococcus aureus

Amphotericin B - saccharomyces cerevisiae

Bacitracin - micrococcus luteus

Bleomycin - mycobacterium smegmatis

Carbenicillin - pseudomonas aeruginosa

Doxycycline - staphylococcus aureus

Erythromycin - micrococcus luteus

Framycetin - bacillus pumilis , staphylococcus aureus

gentamycin - staphylococcus epidermidis

Kanamycin - bacillus pumilis, staphylococcus aureus

kanamycin B - bacillus subtilis

Neomycin - staphylococcus epidermidis

Novobiocin - staphylococcus epidermidis

Nystatin - saccharomyces cerevisiae

Oxyteracycline - bacillus cereus, staphylococcus aureus

Polymyxin B - bordetella bronchiseptica

Rifamycin - bacillus subtilis

Streptomycin - bacillus subtilis , klebsiella pneumoniae

Tetracycline - bacillus cereus, staphylococcus aureus

- **Disease associated with altered neurotransmitters levels in brain**

Parkinsonism : Decreased DOPAMINE in striatum

Schizophrenia : Increased DOPAMINE levels

Depression : Decreased NOREPINEPHRINE & 5-HT

Mania : Decreased NOREPINEPHRINE & 5-HT

Hallucination : Increased 5-HT

Alzheimer's : Decreased ACETYLCHOLINE & Destruction of Cholinergic Neurons

Athetosis : Decreased GABA in Putamen

Chorea : Decreased GABA in Caudate Nucleus

Amyotrophic lateral sclerosis: Decreased ACETYLCHOLINE

- **ENZYMES AND THEIR METAL COFACTORS**

FE²⁺ - CYTOCHROME OXIDASE, CATALASE, PEROXIDASE

CU²⁺ - CYTOCHROME OXIDASE

ZN²⁺ - DNA POLYMERASE, CARBONIC ANHYDRASE, ALCOHOL DEHYDROGENASE

MG²⁺ - HEXOKINASE, GLUCOSE-6-PHOSPHATE

MN²⁺ - ARGINASE

K⁺ - PYRUVATE KINASE

NI²⁺ - UREASE

MO - NITRATE REDUCTASE

SE - GLUTATHIONE PEROXIDASE

- **MICROSOMAL ENZYMES INDUCERS AND INHIBITORS**

MICROSOMAL ENZYME INDUCERS

ALCOHOL

CHLORALHYDRATE

CORTISONE

NICOTINE

PREDNISOLONE

PHENYTOIN

CHLORDIAZEPOXIDE

IMIPRAMINE

PHENOBARBITAL

TESTOSTERONE

MICROSOMAL ENZYME INHIBITORS

ALLOPURINOL

ORAL ANTIDIABETICS

DISULFIRAM

METRONIDAZOLE

ORAL ANTICOAGULANTS

ANABOLIC AGENTS

CHLORAMPHENICOL

ISONIAZID

MONOAMINE OXIDASE INHIBITORS

CEMETIDINE

• **DISEASE AND THEIR DEFECTIVE ENZYME**

Albinism - tyrosine-3-mono oxygenase

Alkaptonuria - homogentisate 1,2-dioxygenase

Galactosemia - galactose-1-phosphate uridylyl transferase

Homocystinuria - cystathione B- synthase

Phenylketonuria - phenylalanine-4-mono oxygenase

Taysachs disease - hexosaminidase A

Hypervalinemia - valine transaminase

Arginosuccinic - arginosuccinate lyase acidemia

krabbes disease - beta galactosidase

Fabrys disease - alpha galactosidase

Niemann pick disease - sphingomyelinase

farbers disease - ceramidase

gauchers disease - beta gluosidase

- **DIAGNOSTIC TESTS**

a) Syphilis-

VDRL test, Kahn test, Wasserman test

Treponema immobilization test,

Fluorescent antibody-absorbed serum test.

B) Diphtheria-

Schick test, Elek test

C) T.B-

Tuberculin, Mantoux test

D) Leprosy-

Lepromin test

E) Typhoid or enteric fever-

Widal test

F)Rhumetoid arthritis-

Rose water test

G) Small pox-

Ouchterlony

E)Pneumonia-

Cold hemagglutination test, streptococcus MG hemagglutination test

F)brucellosis-

Coombs test(opsonization test)

G)lymphogranuloma venerum-

Frei test

H)typhus fever-

Weil felix test

I)hemophillius-

Ducrey test

G) scarlet fever-

Dick test

H)to detect human chornic gonadotrophin in serum of woman-

Radio immuno assay(RIA)

- **BIOASSAYS OF DRUGS**

Adrenaline - bp raising effects in spinal cats

noradrenaline- bp raising effects in spinal cats

histamine- contraction of isolated guinea pig ileum

insulin- hypoglycemic convulsions in mice

acetylcholine- contraction of isolated frog rectus muscle

d-Tc - rabbit head drop due to pralysis of neck muscles

digitalis- death due to cardiac arrest in guinea pig

oxytocin- contraction of guinea pig uterine muscles

androgens - growth copons comb

adreno cortico tropic hormone- adrenal ascorbic acid estimation in hypophysectomised rats

- **CLASSIFICATION OF POTASSIUM CHANNEL OPENERS**

BENZOPYRAN DERIVATIVES:

kromokalmn

bimakalim

erikalim

...See More

- **MICRO ORGANISMS USED AS BIOASSAYS FOR VITAMINS**

ASSAY MICRO ORGANISM	-	VITAMIN
----------------------	---	---------

lactobacillus casei	-	biotin, folic acid, pyridoxal, riboflavin
l. arabinosus acid	-	calcium pantothenate, nicotinic
l. leichmanii	-	cyanocobalamin
l. viridans	-	thiamine
saccharomyces urarum	-	inositol
acetobacter suboxydans	-	panthothenol
neurospora crassa (or) s. carlsberginsis	-	pridoxine

- **Biological indicators**

moist heat sterilisation (121 degree Centi):	bacillus stearo thermophilus
dry heat sterilisation (160 degree centi) :	bacillus subtilis var niger
hydrogen peroxide and peracetic acid :	bacillus stearo thermophilus
ethylene oxide , formaldehyde :	bacillus subtilis var niger
ionising radiation :	bacillus pumilis

- **Tests and their uses**

watson schwartz test - urobilinogen

schumms test - heme

carrprice test - vit A

gmelins test - bile pigments

gothlin test - scurvy

gofmann test - serum cholesterol

murexide test - uric acid

reinsch test - heavy metals

gordons test - spinal fluid

biuret test - peptides

legals test- for estimation of acetone

ames test - carcinogenicity

- **side effects nd shortcuts**

Short cuts for GPAT AND NIPER

Busulfan feature : ABCDEF

Alkylating agent

Bone marrow suppression

CML Indication

Dark skin(hyperpigmentation)

Endocrine insufficiency(adrenal)

Fibrosis

Drugs causing Torsades de Pointes:APACHE

Amiodarone

Procainamide

Arsenium

Cisapride

Haloperidol

Erythromycin

Morphine side effects :MORPHINE

Myosis

Out of it(sedation)

Respiratory depression

Pneumonia(aspiration)

Hypotension

Infrequency(constipation,urina

ry retention)

Nausea

Emesis

Aspirin side effects :ASPIRIN

Asthma

Salicylism

Peptic ulcer disease/phosphorylation-oxidat

ion uncoupling/platelet disaggregation

Intestinal blood loss

Reye's Syndrome

Idiosyncrasy

Noise(tinnitus)

SSRIs side effects :SSRI

Serotonin syndrome

Stimulate CNS

Reproductive dysfunction in male

Insomnia

Inhalation anesthetics : SHINE

Sevoflurane

Halothane

Isoflurane

Nitrous oxide

Enflurane

Teratogenic drugs : "Win TERATogenic

Warfarin

Thalidomide

Epileptic drugs: Phenytoin, Valproate, Carb

amazepine

Retinoid

ACE inhibitor

Third element : Lithium

Gynaecomastia causing drugs: DISCOS

Digoxin

Isoniazid

Spironolactone

Cimetidine

Oestrogens

Stilboestrol

Methyldopa Side effects :METHYLDOPA

Mental retardation

Electrolyte imbalance

Tolerance

Headache/ Hepatotoxicity

psYcological upset

Lactation in female

Dry mouth

Oedema

Parkinsonism

Antirheumatic agents :CHAMP

Cyclophosphamide

Hydroxychloroquine and chloroquine

Auranofin and other gold compounds

Methotrexate

Penicillamine

Phenytoin: adverse effects PHENYTOIN

P-450 interactions

Hirsutism

Enlarged gums

Nystagmus

Yellow-browning of skin

Teratogenicity

Osteomalacia

Interference with B12 metabolism (hence anemia)

Neuropathies: vertigo, ataxia, and headache

Sodium Valproate side effects VALPROATE

Vomiting

Alopecia

Liver toxicity

Pancreatitis/ Pancytopenia

Retention of fats (weight gain)

Oedema (peripheral oedema)

Appetite increase

Tremor

Enzyme inducer (liver)

Amiodarone: action, side effects: 6 P's:

Prolongs action potential duration

Photosensitivity

Pigmentation of skin

Peripheral neuropathy

Pulmonary alveolitis and fibrosis

Peripheral conversion of T4 to T3 is inhibited -> hypothyroidism

Antiparkinson Drugs :SALAD

Selegiline

Anticholinergics (trihexyphenidyl, benhexol, ophenadrine)

L-Dopa + peripheral decarboxylase inhibitor (carbidopa, benserazide)

Amantadine

Dopamine postsynaptic receptor agonists (bromocriptine, lisuride, pergolide)

Therapeutic Index Formula TILE

$$TI = LD / ED$$

Anti epileptic drugs Dr.BHAISAB's New PC.

Deoxy barbiturates

Barbiturates

Hydantoin

Aliphatic carb acids

Iminostilbenes

Succinimides

BZD's

Newer drugs

Phenyltriazines

Cyclic gaba analogues

Adverse effects of Tetracyclines-KAPIL DEV

Kidney toxicity

Antianabolic effect

Phototoxicity

Liver toxicity

Diabetes insipidus

CAPTOPRIL Side effects CAPTOPRIL

Cough Angioedema

Agranulocytosis

Proteinuria/ Potassium excess

Taste changes

Orthostatic hypotension

Pregnancy contraindication/ Pancreatitis/ Pressure drop (first dose hypertension)

Renal failure (and renal artery stenosis contraindication)/ Rash

Indomethacin inhibition

Leukopenia/Liver toxicity

Lithium: side effects LITH

Leukocytosis

Insipidus [diabetes insipidus, tied to polyuria]

Tremor/ Teratogenesis

Hypothyroidism

Myocardial Infarction(MI): signs and symptoms PULSE

Persistent chest pains

Upset stomach

Lightheadedness

Shortness of breath

Excessive sweating

MI: basic management (Shortcut:BOOMAR)

Bed rest

Oxygen

Opiate

Monitor

Anticoagulate

Reduce clot size

Treatment of Heart Failure: ABCDE

ACE inhibitors

Beta-blockers

Calcium channel blockers

Diuretics

Endothelin-converting enzyme inhibitors

Essential Amino acids

Methionine

Threonine

Leucine

Isoleucine

Tryptophan

Valine

Lysine

Phenyl alanine