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INDIAN PHARMACOPOEIA COMMISSION
MIN. OF HEALTH & FAMILY WELFARE
GOVERNMENT OF INDIA
SECTOR -23, RAJ NAGAR, GHAZIABAD - 201002

No. IPC/7021/IP-2014/ER-008 **Dated**: 09-03-2016

To,

1. **DCG (I)/ CDSCO, Zonal Offices**
2. **All State Drug Controllers**
3. **Members of Scientific Body of the IPC**
4. **Members of Sub-committee of Scientific Body of the IPC**
5. **Government Analysts**
6. **Director of Drug Laboratories**
7. **IDMA/OPPI/BDMA/FSSAI/Small Scale Industry Associations**

ERRATA – 008 for IP 2014

As you are aware that the 7th edition of Indian Pharmacopoeia has become official from 1st April, 2014. Based on scientific inputs, some monographs, appendices needed corrections, accordingly an Errata – 008 is issued containing minor corrections. This is for notice and immediate compliance.

Yours faithfully,

(Dr. G. N. Singh)
Secretary-cum-Scientific Director

Encl:
ERRATA – 008 for IP 2014

CC to: Publication Division to put up on IPC website.

Errata-008 to IP-2014

4.2 General Reagents.

Page 777

Insert before 1, 2- Dichloroethane.

2,6- Dichloroaniline: $C_6H_5Cl_2N$=162.02

Analytical reagent grade of commerce.

Off-white powder; mp, between 38^0 to 41^0

Page 782

Insert before Ether.

Ethanolic acetic–ammonia buffer pH 3.7. To 15.0 ml of *acetic acid* add 60 ml of *ethanol (95 per cent)* and 20 ml of *water* . Adjust to pH 3.7 by the addition of *ammonia* . Dilute to 100.0 ml with *water*

Page 797

Insert before 1- Naphthol.

Naphtharson: Thorin;disodium4-[(2-arsonophenyl)azo]-3-hydroxynaphthalene-2,7-disulphonate

$C_{16}H_{11}AsN_2Na_2O_{10}S_2$ = 576.3

Red powder, soluble in water.

Naphtharson Solution. A 0.058 per cent w/v solution;

SENSITIVITY- To 50 ml of *ethanol (95per cent)*, add 20 ml of *water* , 1 ml of 0.05M *sulphuric acid* and 1 ml of the naphtharson solution. Titrate with 0.025M *barium perchlorate* the colour changes from orange-yellow to orange-pink.

Store protected from light; use within one week.

4.5 Volumetric Reagents and Solutions. Page 834

Insert before Benzethonium Chloride, 0.004 M.

Barium Perchlorate 0.025M: Dissolve 15.8 g of *barium hydroxide* in a mixture of 75 ml of *water* and 7.5 ml of *perchloric acid* , adjust to pH 3.0 with *perchloric acid* and filter if necessary. To the solution add 150 ml of *ethanol (95 per cent)*, dilute to 250 ml with *water* and add sufficient *buffer solution pH 3.7* to produce 1000 ml. Dilute 500 ml of this solution to 1000 ml with *buffer solution pH 3.7.* Standardise the solution in the following manner.

To 5.0 ml of 0.05M *sulphuric acid* add 5.0 ml of *water* , 50 ml of *acetate buffer pH 3.7* and 0.5 ml of *alizarin Red S solution* and titrate with the *barium perchlorate solution* until an orange-red colour appears.

1 ml of 0.05M *sulphuric acid* is equivalent to 0.01681 g of $Ba(ClO_4)_2$.

Bacitracin. Page 1129

Appearance of solution.

Change **to**: A 1.0 per cent w/v solution in *carbon dioxide-free water* is clear (2.4.1)

Carnauba Wax. Page 1284

Acid value. Last line.

Change **from**: "$28.05(n_2–n_1)/w$

to: "$28.05(n_1–n_2)/w$

Cetrimide Cream. Page 1343

Delete. Usual Strength

Cetrimide Emulsifying Ointment. Page 1344

Delete. Usual Strength

Clonidine Tablets. Page 1438

Assay. Change **to:**

Assay.

Test solution. Weigh and powder 20 tablets. Transfer a quantity of powder equivalent to 0.1 mg of clonidine hydrochloride to a 100 ml volumetric flask. Add about 60 ml of mobile phase, shake by mechanical means for 15–30 min, dilute with mobile phase to volume, and mix. Centrifuge a portion of this solution to obtain a clear solution.

Reference solution (a). A 0.01 per cent w/v solution of *clonidine hydrochloride RS* in mobile phase.

Reference solution (b). Dilute reference solution (a) to obtain a solution of 0.0001 per cent w/v of clonidine hydrochloride in mobile phase.

Reference solution (c). A 0.0012 per cent w/v solution of *2,6-dichloroaniline* in mobile phase.

Reference solution (d). Dilute reference solution (a) and reference solution (c) to obtain 0.0002 per cent w/v solution of clonidine hydrochloride and 0.00024 per cent w/v solution of 2,6-dichloroaniline in mobile phase.

Chromatographic system

- a stainless steel column 15 cm x 4.6 mm, packed with deactivated for basic compounds octylsilane bonded to porous silica(5 µm),
- mobile phase: a mixture of 500 volumes of *methanol*, 500 volumes of 0.22 per cent w/v solution of *sodium octanesulphonate* in *water*. and 1 volumes of *phosphoric acid*, adjusted to pH 3.0 with *1 M sodium hydroxide.*
- flow rate: 1.5 ml per minute,
- spectrophotometer set at 220 nm,
- injection volume: 50 µl.

Inject reference solution (b). The test is not valid unless the relative standard deviation of clonidine peak is not more than 2.0 per cent.

Inject reference solution (d). The relative retention time for clonidine and 2,6-dichlroaniline are about 0.5 and 1.0 respectively. The test is not valid unless the tailing factor of clonidine peak is not more than 1.5 and the theoretical plate is not less than 3500.

Inject reference solution (b) and the test solution.

Calculate the content of $C_9H_9Cl_2N_3,HCl$ in the tablets.

Crospovidone. Page 1470

Delete. Labelling

Crotamiton. Page 1471

Related substances. *Test solution (a).* Line2.

Chnage **from:** 10.0 ml

to: 100.0 ml

Desferrioxamine Injection. Page 1517

Identification B.

Change **from:** The titrated solution (solution A) obtained in the Assay is reddish brown. The colour is extracted by benzyl alcohol but not by ether.

to: In the test for related substances, the principal peak in the chromatogram obtained with the test solution corresponds to that in the chromatogram obtained with the reference solution(b).

Diazoxide. Page 1549

Appearance of solution. Line 4.

Change **from:** YS1

to: YS7

Dimethicone. Page 1586

Shift Bacterial Endotoxin Before Assay to after assay.

Add before Identification.

Description. A Clear, colourless liquid of various viscosities.

Dipyridamole. Page 1592.

Related substances. *Reference solution (b).* Line 2.

Change **from :** 10.0 ml

to : 100.0 ml

Disopyramide Phosphate Capsules. Page 1596

Dissolution. Para 1, last line.

Change **from**: 87 as the specific absorbance…

to:125 as the specific absorbance…

Disopyramide Phosphate Prolonged-release Capsules. Page 3843

Delete the following statement.

*Disopyramide Phosphate Prolonged-release Capsules manufactured by different manufacturers, whilst complying with the requirements of the monograph, are not interchangeable, as the dissolution profile of the product may not be the sam*e

Divalproex Sodium. Page 1601

Heavy Metals.

Change **from:** Method A

to: Method B

Hydrochlorothiazide. Page 1900

Related substances.

Add. before solvent mixture (a).

Buffer solution. Dissolve 35.8 g of *disodium hydrogen phosphate* in 1000 ml of *water*, adjusted to pH 3.2 with dilute *phosphoric acid.* Dilute 100.0 ml of this solution to 2000.0 ml with *water.*

In the entire test.

Change **from:** *Phosphate buffer pH 3.2.*
to: *buffer solution.*

Assay. Change **to:**

Assay.: Determine by liquid chromatography (2.4.14) as described under Related substances with the following modification.

Test solution (a). Dilute 1.0 ml of test solution to 20.0 ml with *buffer solution*.
Reference solution(c). Dissolve 30.0 mg of *hydrochlorothiazide RS* in 5 ml of a solvent mixture (a), using sonication if necessary, and dilute to 20.0 ml with *buffer solution*. Dilute 1.0 ml of this solution to 20.0 ml with *buffer solution*.

Chromatographic system

- a stainless steel column 10 cm x 4.6 mm packed with octadecylsilane silica gel (3 µm),
- mobile phase: A. to 940 ml of *buffer solution*, add 60.0 ml of *methanol* and 10.0 ml of *tetrahydrofuran* and mix,
  B. to a mixture of 500 ml of *methanol* and 500 ml of *buffer solution*, add 50.0 ml of *tetrahydrofuran* and mix,
- a gradient programme using the conditions given below,
- flow rate: 1.6 ml per minute,
- spectrophotometer set at 224 nm,
- injection volume: 10 µl.

Time (in min.)	Mobile phase A (per cent v/v)	Mobile phase B (per cent v/v)
0	80	20
4	80	20
10	20	80
11	80	20

Name	Relative retention time
impurity A[1]	0.9
Hydrochlorothiazide (Retention time: about 2.2 minutes)	1.0

[1]6-chloro-2*H*-1,2,4-benzothiadiazine-7-sulfonamide 1,1-dioxide (chlorothiazide).

Inject the reference solution (a). The test is not valid unless the resolution between the peaks due to impurity A and hydrochlorothiazide is not less than 2

Inject the reference solution (c) and the test solution (a).

Calculate the content of $C_7H_8ClN_3O_4S_2$.

Hydrochlorothiazide Tablets. Page 1901

Related substances.

Add. before solvent mixture.

Buffer solution. Dissolve 35.8 g of *disodium hydrogen phosphate* in 1000 ml of *water,* adjusted to pH 3.2 with dilute *phosphoric acid.* Dilute 100.0 ml of this solution to 2000.0 ml with *water.*

In the entire test.

Change **from:** *Phosphate buffer pH 3.2.*

to: *buffer solution.*

Hydroxypropylmethylcellulose. Page 1920

Apparent Viscosity. Line 8

Change **from**: Method B.

to: Method C

Isosorbide Dinitrate Tablets. Page 2013

Related substances. *Reference solution (c).* Line 2.

Change **from**: *isosorbide dinitrate RS*

to: *diluted isosorbide dinitrate RS*

Assay. *Reference solution (b).* Line 2.

Change **from**: *isosorbide dinitrate RS*

to: *diluted isosorbide dinitrate RS*

Metronidazole Injection. Page 2218

Related substances. Under chromatographic system. Mobile phase. Line 2.

Change **from**: *0. 1 M potassium dihydrogen orthophosphate*

to: *0. 01 M potassium dihydrogen orthophosphate*

Mometasone Cream. Page 2245

Identification. *Reference solution (b).*

Change **to**: A mixture of equal volume of test solution and reference solution (a).

Mometasone Ointment. Page 2245

Identification. *Reference solution (b).*

Change **to**: A mixture of equal volume of test solution and reference solution (a).

Penicillamine Tablets. Page 2445.

Mercuric salts. Last line
Change **from:** 40 ppm

to: 10 ppm

Diluted Pentaerythritol Tetranitrate. Page. 2446

Impurity A. *Test solution*
Change **from**: Dissolve about 0.1 g of the substance under examination in 5.0 ml of *ethanol (95 per cent)*, filter.
to: Shake a quantity of powder containing 0.1 g of pentaerythritol tetranitrate in 5.0 ml of *ethanol (95 per cent),* filter.

Related substances. *Test solution (a).*
Change **from**: Shake about 25 mg of the substance under examination in 20 ml of the mobile phase for 15 minutes and dilute to 25.0 ml with the mobile phase, filter.
to: shake a quantity of powder containing 25 mg of pentaerythritol tetranitrate in 20 ml of the mobile phase for 15 minutes and dilute to 25.0 ml with the mobile phase, filter.

After "chromatographic system", Para 1, Line 6.
Change **From**: impurity C is about 0.3.
to: impurity C is about 3.0.

Assay. Line 3.
Change **from**: Inject reference solution (b) and test solution (a).
to: Inject reference solution (b) and test solution (b).

Promethazine Syrup. Page. 2572

Identification
Change **to:** Transfer an accurately measured volume of the sample containing about 25.0 mg of promethazine hydrochloride to a 250.0 ml of separator and 10.0 ml of *ammonia solution*. Extract the mixture with six quantities, each of 40.0 ml of *chloroform*, shaking vigorously. Wash the combined *chloroform* layer with 25.0 ml of 10 per cent *hydrochloric acid* and wash the acidic layer with 25.0 ml *chloroform* and add the washing to the main chloroform extract. Evaporate the combined extracts on a stream bath, with the aid of current of air, to a volume of 5.0 to 10.0ml, and finally evaporate, with the aid of current of air, to dryness and dissolve the residue in 2.5 ml of *carbon disulfide*. The resulting solution complies with the following test.
Determine by infrared absorption spectrophotometry (2.4.6). Compare the spectrum with that obtained by treating 25.0 mg of *promethazine hydrochloride RS* in the same manner.

Assay
Change **to:** Transfer an accurately measured volume of the sample containing about 25.0 mg of promethazine hydrochloride to a 250.0 ml of separator and 10.0 ml of *ammonia solution*. Extract the mixture with six quantities, each of 40.0 ml of *chloroform*, shaking vigorously. Wash the combined *chloroform* layer with about 25.0 ml of 10 per cent *hydrochloric acid* and wash the acidic layer with 25.0 ml chloroform and add the washing to the main chloroform extract. Evaporate the combined extracts on a steam bath, with the aid of current of air, to a volume of 5.0 to 10.0 ml, and finally evaporate, using only a current of air, to dryness. Dissolve the residue, with slight warming in 1.0 per cent v/v *sulphuric acid*, and transfer to 500.0 ml volumetric flask and dilute to volume with the same medium. Mix well and filter, rejecting the first few ml of the filtrate. Measure the absorbance of the resulting solution at maximum at about 298 nm (2.4.7), using 1.0 per cent v/v *sulphuric acid* as blank. Calculate the content of $C_{17}H_{20}N_2S$,HCl in the sample from the absorbance obtained from a 0.005 per cent w/v solution of *Promethazine Hydrochloride RS* in 1.0 per cent v/v *sulphuric acid*.

Quinine Sulphate. Page 2619

Identification. D

Delete the test.

E**.** Change **to:** D

Sodium Valproate. Page 2770, 3930

Related Substances.

Under chromatographic system. Line 1.

Change **from**: – a capillary column 30 m x 0.53 mm packed with wide bore fused silica,

to: – a capillary column 30 m x 0.53 mm, wide bore fused silica, coated with macrogol 20 000 and 2-nitroterephthalate (film thickness 0.5 µm).