Phone No. : 2783400, 2783401 2783392
Fax No. : 2783311
E-Mail : ipclab@vsnl.net
Website : www.ipc.gov.in

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

No. IPC/7035/IP-2014/AL-2 **Dated**: 27-05-2014

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/FFSAI/Small Scale Industry Associations**

AMENDMENT LIST- 2 FOR IP 2014

As you are aware that the 7th edition of Indian Pharmacopoeia i.e. IP 2014 is official from 1st April, 2014. Based on scientific inputs, some monographs, appendices needed upgradation, accordingly an Amendment List No. 2 is issued containing such amendments. This is for notice and immediate compliance.

Yours faithfully,

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

Encl:
Amendment List-2 for IP 2014

AMENDMENT LIST- 2 TO IP 2014

2.2.11. Sterility
Table 2. Last line, column 3
Change **from** : 30 to 35
to: 20 to 25

4.2. General Reagents

Page 764
Insert before **4-Aminomethylbenzoic Acid**
3-Aminomethylalizarin-*N,N*-diacetic Acid. Aminomethylalizarindiacetic acid; alizarin complexone dihydrate; $C_{19}H_{15}NO_8,2H_2O$ = 421.4

A fine, ochre to orange-brown powder; melting point, about 185°.
Complies with the following test.

LOSS ON DRYING (2.4.19) - Not more than 10.0 per cent, determined on 1 g.

Aminomethylalizarindiacetic Acid Reagent
Solution I. Dissolve 0.36 g of *cerium(III) nitrate* in sufficient *water* to produce 50.0 ml.
Solution II. Suspend 0.7 g of *3-aminomethylalizarin-N,N- diacetic acid* in 50 ml of *water*. Dissolve with the aid of about 0.25 ml of *13.5M ammonia*, add 0.25 ml of *glacial acetic acid* and dilute to 100.0 ml with *water*.
Solution III. Dissolve 6 g of *sodium acetate* in 50 ml of *water*, add 11.5 ml of *glacial acetic acid* and dilute to 100.0 ml with *water*.

To 33 ml of *acetone* add 6.8 ml of solution III, 1.0 ml of solution II and 1.0 ml of solution I and dilute to 50.0 ml with *water*. Use within 5 days.

Complies with the following test.
Sensitivity. To 1.0 ml of *fluoride standard solution (10 ppm F)* add 19.0 ml of *water* and 5.0 ml of the reagent under examination. After 20 minutes, a distinct blue colour is produced.

Page 765
Insert before **Ammonium Carbonate, 2M**
Ammonium Carbonate Solution. A 15.8 per cent w/v solution of *ammonium carbonate*.

Arterolane Maleate. Page 1084
Para 1
Change **to**: Arterolane Maleate is [(*N*-(2-amino-2-methylpropyl)-2-*cis*-dispiro(adamantane-2,3'-[1,2,4]trioxolane-5',1''-cyclohexane)-4''- yl]acetamide maleate.

Maleic Acid. Insert in the beginning
22.0 per cent to 24.5 per cent w/w, calculated on anhydrous basis

Assay.
Solvent mixture. Delete the requirement

Test solution. Lines 2 and 3
Change **from** : solvent mixture
to: mobile phase

Reference solution. Line 2
Change **from** : solvent mixture
to: mobile phase

After chromatographic system, para 1, line 2
Change **from** : 3000
to: 600

Line 3
Change **from** : 2.0
to: 3.0

Chlorcyclizine Hydrochloride. Page 1356

Related substances. Last para
Change **to**: Apply to the plate 10 µl of each solution. After development, dry the plate in air and expose to iodine vapours for 10 minutes. In the chromatogram obtained with test solution (a), any spot corresponding to methylpiperazine is not more intense than the spot in the chromatogram obtained with reference solution (b)(0.5 per cent). Any other secondary spot is not more intense than the spot in the chromatogram obtained with reference solution (c) (0.2 per cent). The test is not valid unless the chromatogram obtained with reference solution (d) shows two clearly separated spots.

Clindamycin Injection. Page 1420
Para 2, line 2
Change **from**: 105.0 per cent
to: 120.0 per cent

Clomifene Tablets. Page 1431
Dissolution. D, line 1
Change **from**: 65 per cent
to: 70 per cent

Clonidine Tablets. Page 1438
Uniformity of content. Para 2, line 1
Change **from**: 200 ml
to: 20 ml

Para 2, line 8
Change **from**: supernatant liquid
to: chloroform layer

Assay. Line 2
Change **from**: 100 µg
to: 150 µg

Betacyclodextrin. Page 1479
Assay. After chromatographic system, para 1, last line
Change **from**: is not more than 2.0 per cent.
to: for betacyclodextrin is not more than 2.0 per cent.

Docetaxel Anhydrous. Page 1606

Heavy metals.
Change **from**: Dissolve 1.0 g in 20 ml of a mixture of 15 volumes of *water* and 85 volumes of *dimethylformamide* 1.0 g of complies with the limit test for heavy metals, method D (20 ppm), using 10 ml of *lead standard solution (1 ppm Pb)*.
to: Dissolve 1.0 g in 20 ml of a mixture of 15 volumes of *water* and 85 volumes of *dimethylformamide*. 12 ml of this solution complies with the limit test for heavy metals, method D (20 ppm), using 10 ml of *lead standard solution (1 ppm Pb)*.

Water.
Change **from**: Not more than 1.5 per cent, determined by injecting 800 µl of 25 mg per ml solution in *methanol*.
to: Not more than 1.5 per cent, determined on 0.2 g.

Doxofylline. Page 1625

Assay. After chromatographic system, para 1, line 1
Change **from**: Inject reference solution (b)
to: Inject the reference solution

Para 2, line 1
Change **from**: Inject reference solution (b)
to: Inject the reference solution

Drotaverine Tablets. Page 1632

Para 2, line 3
Change **from**: drotaverine, $C_{24}H_{31}NO_4$
to: drotaverine hydrochloride, $C_{24}H_{31}NO_4$.HCl.

Disintegration. Delete the requirement

Assay. Chromatographic system,
mobile phase Change **to:** mobile phase: a mixture of 25 volumes of buffer solution prepared by dissolving 3.12 g of *sodium dihydrogen orthophosphate* in *water* and dilute to 1000 ml with *water*, adjusting the pH to 6.5 with *sodium hydroxide solution* ,40 volumes of *methanol and 35* volumes of *acetonitrile,*

Last line
Change **from**: $C_{24}H_{31}NO_4$
to: $C_{24}H_{31}NO_4$.HCl.

Erythromycin Gastro-resistant Tablets. Page 1683

Assay. Para 2, line 2
Change **from**: 10 ml
to: 25 ml

Fasudil Hydrochloride. Page 1740

Water. Change **to**:
Water (2.3.43). 2.5 to 3.5 per cent, determined on 0.5 g.

Fentanyl Injection. Page 1749

Identification. C
Change **from**: reaction B
to: reaction A

Fluvoxamine Maleate. Page 1819

Related substances. After chromatographic system, para 1, line 1
Change **from**: reference solution (a)
to: reference solution (b)

Hydroxychloroquine Sulphate. Page 1915

Related substances. Chromatographic system, gradient programme,
Change **to**:

Time (in min.)	Mobile phase A (per cent v/v)	Mobile phase B (per cent v/v)
0	100	0
2	100	0
10	85	15
18	100	0
25	100	0

Chlorides. Line 1
Change **from**: 1.4 g.
to: 0.7 g.

Ilaprazole. Page 1947

Assay. *Test solution*, line 4
Change **from**: *acetonitrile.*
to: the mobile phase

Reference solution. Change **to**:
Reference solution. A 0.1 per cent w/v solution of *ilaprazole RS* in *acetonitrile.* Dilute 5.0 ml of this solution to 50.0 ml with the mobile phase.

Meropenem Injection. Page 2179

Sodium Carbonate. Title
Change **to**: **Content of Sodium**

Line 2
Change **from**: sodium carbonate
to: sodium

Labelling. Line 1
Change **from**: meropenem
to: meropenem and sodium

Netilmicin Sulphate. Page 2322

Para 3, Line 1
Change **from**: 650 Units per mg
to: 595 µg per mg of netilmicin ($C_{21}H_{41}N_5O_7$).

Identification. A.
Change **to**: In the Assay, the principal peak in the chromatogram obtained with the test solution corresponds to the peak in the chromatogram obtained with reference solution (a).

Appearance of solution
Change **to**: **Appearance of solution**. A 4.0 per cent w/v solution in *carbon dioxide free water* is clear (2.4.1) and when examined at about 400 nm (2.4.7) shows maximum absorbance of 0.08

Related substances. Change **to**:
Related substances. Determine by liquid chromatography (2.4.14).
NOTE: Use low- actinic glassware.

Test solution. Dissolve 50 mg of the substance under examination in the mobile phase and dilute to 50.0 ml with the mobile phase.

Reference solution (a). Dilute 1.0 ml of the test solution to 100.0 ml with the mobile phase.

Reference solution (b). A solution containing 0.1 per cent w/v each of *netilmicin sulphate RS* and *sisomicin sulphate RS* in the mobile phase.

Chromatographic system
- a stainless steel column 25 cm x 4.6 mm, packed with octadecylsilane bonded to porous silica (5 µm),
- mobile phase. a mixture of 38 volumes of *acetonitrile* and 62 volumes of 2.02 per cent w/v solution of *sodium-1-heptane sulphonate* in 0.5 per cent v/v *orthophosphoric acid*,
- flow rate: 1 ml per minute,
- spectrophotometer set at 205 nm,
- injection volume: 20 µl.

Inject reference solutions (a) and (b). The test is not valid unless the resolution between the peaks due to netilmicin sulphate and sisomicin sulphate is not less than 1, in the chromatogram obtained with reference solution (b). The column efficiency is not less than 3000 theoretical plates and tailing factor is not more than 2.0 per cent in the chromatogram obtained with reference solution (a).

Inject reference solution (a) and the test solution. In the chromatogram obtained with the test solution, the area of any secondary peak is not more than the area of the principal peak in the chromatogram obtained with reference solution (a)

(1.0 per cent). The sum of the areas of all the secondary peaks is not more than 5 times the area of the principal peak in the chromatogram obtained with reference solution (a) (5.0 per cent).

Sulphates. Line 1
Change **from**: anhydrous
to: dried

Assay. Change **to**:
Assay. Determine by liquid chromatography (2.4.14) as described in the test for Related substances with the following modifications.
Reference solution (a). A 0.1 per cent w/v solution of *netilmicin sulphate RS* in the mobile phase.

Inject reference solutions (a) and (b). The test is not valid unless the resolution between the peaks due to netilmicin sulphate and sisomicin sulphate is not less than 1, in the chromatogram obtained with reference solution (b). The column efficiency is not less than 3000 theoretical plates, tailing factor is not more than 2.0 per cent and the relative standard deviation for replicate injections is not more than 1.0 per cent in the chromatogram obtained with reference solution (a).

Inject reference solution (a) and the test solution.

Calculate the content of $C_{21}H_{41}N_5O_7$

Nicorandil. Page 2329

Related substances. After chromatographic system, para 2, last line
Change **from**: reference solution (b)
to: reference solution

Oxcarbazepine. Page 2397

Related substances. Chromatographic system, mobile phase, line 5
Change **from**: adjusting to pH 6.0
to: adjusted to pH 6.0 with *dilute orthophosphoric acid*,

Propofol Injection. Page 2578

Assay. Para 3
Change **from**: reference solution (b)
to: reference solution (a)

Repaglinide Tablets. Page 2651

Related substances. Last para,
Change **to**: Inject the test solution. The sum of areas of all the secondary peaks is not more than 0.5 per cent, calculated by area normalisation.

Ursodeoxycholic Acid Tablets. Page 2944

Dissolution. Line 1,
Change **from**: Apparatus No. 2,
to: Apparatus No. 1,

Voglibose. Page 2979

Related substances. *Test solution*. line 2
Change **from**: 1.5 ml of *0.05 M ammonium acetate*
to: 2.5 ml of *0.05 M ammonium acetate*

Storage. Change **to**:
Storage. Store protected from light and moisture, at a temperature not exceeding 25º.

Purified Water. Page 2988

Insert before **Category**

Microbial contamination (2.2.9). For monitoring purpose. Total viable count not more than 100 cfu per ml. Specified pathogens should be absent.

Tests.

Acidity or alkalinity.

Change **from:** To 10 ml, freshly boiled and cooled in a borosilicate glass flask, add 0.05 ml of *methyl red solution*; the resulting solution is not coloured. To 10 ml add 0.1 ml of *bromothymol blue solution*; the resulting solution is not coloured.

to: To 10 ml, freshly boiled and cooled in a borosilicate glass flask, add 0.05 ml of *methyl red solution*; the resulting solution is not red. To 10 ml add 0.1 ml of *bromothymol blue solution*; the resulting solution is not blue.

Microbial contamination (2.2.9). Delete the requirement.

Water for Injection in Bulk. Page 2989

Microbial contamination. Line 2

Delete: Specified pathogens should be absent.