OPKO CHILE S.A.

ESTUDIO DE ESTABILIDAD

Imaroz liofilizado para solución inyectable 40 mg con solvente

Omeprazol + Agua para inyectables

Subdepartamento Registros y Autorizaciones Sanitarias

ÍNDICE

NOTA ACLARATORIA

El producto terminado es un combipack compuesto por:

(a) Un vial con omeprazol liofilizado,
(b) Una ampolla con agua para inyectables.

- El vial con omeprazol liofilizado es fabricada por el proveedor de producto terminado Ciron Drugs & Pharmaceutical PVT LTD (Ciron), ubicado en N-118, 119, MIDC, Tarapur, Boisar, Dist. Thane - 401 506, Maharashtra state, India.

- La ampolla de agua utilizada para reconstituir el liofilizado de omeprazol es comprada por Ciron como producto terminado a Amanta Healthcare Ltd. ubicado en Plot No. 876, N.H. No. 8, Village Hariyala, Tal-Matar, Hariyala-387 411, Dist Kheda, Gujarat State, India.

ESTUDIO DE ESTABILIDAD DEL VIAL CON LIOFILIZADO

PROTOCOLO

I. PROTOCOLO

Se realizó una evaluación de la estabilidad de tres lotes de IMAROZ liofilizado para solución inyectable 40 mg fabricados por Ciron Drugs & Pharmaceutical PVT LTD utilizando materia prima suministrada por Lee Pharma Limited. El estudio se llevará a cabo a dos tiempos y condiciones ambientales.

A continuación los lotes a analizar:

Número de lote	Fecha de manufactura	Tamaño de lote
EA02051	02/2012	10.000 viales
EA03052	02/2012	10.000 viales
EA04053	02/2012	10.000 viales

1. Condiciones

El estudio se realizó almacenando muestras, en las siguientes condiciones de temperatura y humedad relativa:

	Estudio Acelerado	Estudio a tiempo real
Temperatura	40ºC ± 2ºC	30ºC ± 2ºC
Humedad	75 % ± 5 % H. R.	65 % ± 5 % H. R

2. Tipo de envase

Cada combipack contiene:

- Vial con liofilizado: Vial de vidrio USP tipo I de 10 mL
- Frasco ampolla con solvente: Frasco ampolla de plástico polietileno de baja densidad (LDPE BB120) de 10 mL.

3. Restricciones de almacenamiento

Almacenar protegido de la luz.

4. Número de muestras analizadas

500 viales. Análisis incluyen estudios físicos, químicos y microbiológicos.

5. Fecha de inicio y fin del estudio de estabilidad

- Fecha de inicio: El estudio dio inicio en febrero del 2012.
- Fecha de término: El estudio finalizó en febrero del 2014.

6. Análisis realizados y frecuencia de testeo:

a. Parámetros analizados del frasco ampolla con liofilizado:

PRUEBA	ESPECIFICACIONES
Descripción	Polvo compactado color blanco o casi blanco
pH	10,0-12,0
Esterilidad	Debe ser estéril
Material particulado	≥ 10 µm: menos que 6000 por frasco ≥ 25 µm: menos que 600 por frasco
Contenido de agua	No más del 10% p/p
Sustancias relacionadas	El contenido de cualquier impureza debe ser menor a 0,1%.
Impureza C del Omperazol	No más de 0,1%
Endotoxinas Bacterianas	≤ 8,75 EU/mg
Valoración	90,0%-110,0% (36,0 mg – 44,0 mg por vial)

Estudio acelerado

Parámetros medidos	Inicial	1 mes	2 meses	3 meses	6 meses
Descripción	√	√	√	√	√
pH	√	√	√	√	√
Esterilidad	√	X	X	X	√
Material particulado	√	X	X	X	√
Contenido de agua	√	√	√	√	√
BET	√	X	X	X	√
Sustancias relacionadas	√	√	√	√	√
Impureza C del Omperazol	√	X	X	X	√
Valoración	√	√	√	√	√

Estudio a tiempo real

Parámetros medidos	Inicial	3 M	6 M	9 M	12 M	18 M	24 M
Descripción	√	√	√	√	√	√	√
pH	√	√	√	√	√	√	√
Esterilidad	√	X	X	X	X	X	√
Material particulado	√	X	X	X	X	X	√
Contenido de agua	√	√	√	√	√	√	√
Endotoxinas Bacterianas	√	X	X	X	X	X	√
Sustancias relacionadas	√	√	√	√	√	√	√
Impureza C del Omperazol	√	X	X	X	X	X	√
Valoración	√	√	√	√	√	√	√

NOTA: √ = Parámetro debe ser medido. X = Parámetro NO debe ser medido.

Cabe destacar que la metodología utilizada para la medición de los diferentes parámetros en el estudio de estabilidad del producto IMAROZ liofilizado para solución inyectable 40 mg con solvente es la misma declarada en la metodología original para el análisis del producto terminado.

7. Especificaciones del producto terminado

a. Especificaciones del vial con liofilizado

Test	Especificaciones	Método
Apariencia	Polvo compactado color blanco o casi blanco.	Inspección visual
Identificación API TLC (*con UV a 254 nm)*	La mancha principal en el cromatograma obtenido con la solución muestra b (SMB) es similar en posición y tamaño a la mancha principal en el cromatograma obtenido con la solución de referencia a (SRA).	IH
Uniformidad de peso	No más de dos de los viales se desvía del peso medio en más del 10% y ninguno más del 20%.	IH
Uniformidad de Dosis (Uniformidad de contenido)	115 mg/vial ± 10% (103.5-126,5 mg/vial)	IH
Material particulado	≥ 10 µm: menos que 6000 por frasco ≥ 25 µm: menos que 600 por frasco	USP 38 <788>
Contenido de agua	No más de 10,0%	Karl Fischer
Solución reconstituida Reconstituir el contenido de un frasco con 10 mL de agua para inyectables	La solución reconstituida es clara e incolora al comprarla con la solución B6 y libre de partículas visibles. El tiempo de reconstitución es de 25-30 segundos.	IH
pH	10,0-12,0	IH
Endotoxinas Bacterianas	No más de 8,75 EU/mg	USP 38 <85>
Esterilidad	Debe ser estéril	USP 38 <71>
Sustancias Relacionadas HPLC	El contenido de cualquier impureza debe ser menor a 0,1%.	IH
Impureza C del Omeprazol TLC (*con visualización UV a 254 nm)*	No más de 0,1%	IH
Valoración	Entre un 90,0%-110,0% de la cantidad declarada en el envase (36,0 mg – 44,0 mg)	IH
Material de envase empaque	Vial de vidrio USP tipo I con tapón de goma bromobutilo y sello de aluminio tipo flip off en estuche de cartulina impresa. Combipack contiene además frasco ampolla plástico	Inspección visual

	polietileno de baja densidad (LDPE BB120) con solvente y folleto de información.	

II. FÓRMULA CUALI-CUANTITA

FÓRMULA OMEPRAZOL LIOFILIZADO PARA SOLUCIÓN INYECTABLE 40 mg

Cada combipack contiene:

I. Vial con liofilizado:
Omeprazol Sódico
Equivalente a 40 mg de Omeprazol

II. Frasco ampolla con solvente:
Agua estéril para inyectables

I. Cada vial con liofilizado contiene:

Ingrediente	Cantidad declarada	% de Exceso	Cantidad total	Función	Especificaciones
Omeprazol	40 mg	5 %	42,0 mg*	Principio Activo	British Pharmacopea
Manitol	-	-	68,4 mg	Agente de volumen	British Pharmacopea
Hidróxido de Sodio (10%)	-	-	4,6 mg	Disolvente	British Pharmacopea
Hidróxido de Sodio (10%)	-	-	c.s.p. pH 10-12	Buffer	British Pharmacopea
Agua para inyectables	-	-	c.s.p. 2 mL**	Vehículo	British Pharmacopea

*****Asumiendo una valoración de Omeprazol del 100%.

El Omeprazol sódico se forma luego de una reacción química entre Omprazol e Hidróxido de sodio.
Cálculo:
Nota: La cantidad puede variar dependiendo de los resultados de las pruebas de valoración y contenido de agua.

$$Cantidad\ total\ de\ Omeprazol = \frac{Cantidad\ declarada \times Tamaño\ de\ lote \times 100}{Valoración\ de\ la\ materia\ prima\ base} + \%Exceso$$

** Este ingrediente se pierde durante el proceso de manufactura. Luego de adicionar agua para inyectables, se lleva a cabo el proceso de liofilización para la obtención del polvo.

ESTUDIO DE ESTABILIDAD DEL VIAL CON LIOFILIZADO

TABLAS DE RESULTADOS

III. TABLAS DE RESULTADOS

1. Estudio de estabilidad acelerado

	Ciron Drugs & Pharmaceuticals Pvt. Ltd. Plot Nos. N-118, 119, MIDC, Tarapur, Dist: Thane. Maharashtra, India Quality Assurance Department	Product Code:8727
ACCELERATED TERM STABILITY STUDY REPORT		Reference Protocol No.: C1/QA/SSP/8727
Finished Product Name: OMEPRAZOLE FOR INJECTION		Pharmacopoeial Reference: IHS
Report No.: C1QA/SSR/8727		Effective Date:28/08/2012
		Page No: 1 of 6

Product Name	:	**OMEPRAZOLE FOR INJECTION**	**Packing**	:	10ml USP type I flint tubular vial	**Testing Frequency:** Initial, 1, 2, 3 and 6 Months
Batch No.	:	EA02051				
Mfg. Date	:	Feb 2012	**Storage Condition**	:	40°C ± 2° C / 75%RH± 5% RH	
Exp. Date	:	Jan 2014				

Tests	**Specification**	**Intervals in Months**				
		Initial	**1 M**	**2 M**	**3 M**	**6 M**
Description	White to off- white powder cake.	White powder cake.	White powder cake.	White powder cake.	White powder cake.	White powder cake.
pH	Limit: 10.0 to 12.0	10.55	10.52	10.5	10.48	10.46
Sterility Test	Should be sterile	Sterile	NA	NA	NA	Sterile
Particulate Matter Test	10 µm : Less than 6000 per container	500.00	NA	NA	NA	750
	25 µm : Less than 600 per container	7.00	NA	NA	NA	42
Water	Not more than 10.0%w/w	1.54 %	1.84 %	2.18 %	2.42 %	2.96 %
Bacterial Endotoxins test	Not more than 8.75 USP EU/mg of Omeprazole Sodium BP	Less than 8.75 USP EU/mg of Omeprazole Sodium BP	NA	NA	NA	Less than 8.75 USP EU/mg of Omeprazole Sodium BP
Related Substances (BY HPLC)	Any Impurity: Not more than 0.1%	0.042 %	0.047 %	0.054 %	0.061 %	0.067 %

	Prepared By	**Approved By**	**Authorized By**
Sign & Date	29/08/12	28/08/2012	28/08/12
Name	Mr. Jayvant Patil	Mr. Sushant Kumar Gantayat	Mr. Gopichand Chaphekanade
Designation	Quality Assurance Executive	Quality Assurance Assistant Manager	Quality Assurance Manager

	Ciron Drugs & Pharmaceuticals Pvt. Ltd. Plot Nos. N-118, 119, MIDC, Tarapur, Dist: Thane. Maharashtra, India Quality Assurance Department	Product Code:8727
	ACCELERATED TERM STABILITY STUDY REPORT	Reference Protocol No.: C1/QA/SSP/8727
Finished Product Name: OMEPRAZOLE FOR INJECTION		Pharmacopoeial Reference: IHS
Report No.: C1QA/SSR/8727		Effective Date:28/08/2012
		Page No: 2 of 6

Omeprazole Impurity C (By TLC, UV Visualization, 254 nm)	Any spot with a higher RF value than that of the spot due to omeprazole is not more intense than the spot in the chromatogram obtained with reference solution (b) (0.1 %).	*	*	*	*	*
Assay (By HPLC)	Not less than 90.0% and not more than 110.0 % of Label amount of Omeprazole Sodium BP. (36.0 mg/vial to 44.0 mg/vial)	104.16% 41.66mg/vial	103.74% 41.50 mg/vial	102.64% 41.06 mg/vial	101.71% 40.68 mg/vial	100.25% 40.10 mg/vial

Conclusion	The Product is found to be stable for 6 months at Accelerated Term study.
NA	Not Applicable
*	One spot with a higher RF value than that of the spot due to omeprazole is not more intense than the spot in the chromatogram obtained with reference solution (b) (Less than 0.1 %).

	Prepared By	Approved By	Authorized By
Sign & Date	28/08/12	28/08/12	28/08/12
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	Ciron Drugs & Pharmaceuticals Pvt. Ltd. Plot Nos. N-118, 119, MIDC, Tarapur, Dist: Thane. Maharashtra, India Quality Assurance Department	Product Code:8727
ACCELERATED TERM STABILITY STUDY REPORT		Reference Protocol No.: C1/QA/SSP/8727
Finished Product Name: OMEPRAZOLE FOR INJECTION		Pharmacopoeial Reference: IHS
Report No.: C1QA/SSR/8727		Effective Date:28/08/2012
		Page No: 3 of 6

Product Name	:	**OMEPRAZOLE FOR INJECTION**	**Packing**	:	10ml USP type I flint tubular vial	**Testing Frequency:** Initial, 1, 2, 3 and 6 Months	
Batch No.	:	EA03052					
Mfg. Date	:	Feb 2012	**Storage Condition**	:	40°C ± 2° C / 75%RH± 5% RH		
Exp. Date	:	Jan 2014					

Tests	**Specification**	**Intervals in Months**				
		Initial	**1 M**	**2 M**	**3 M**	**6 M**
Description	White to off- white powder cake.	White powder cake.	White powder cake.	White powder cake.	White powder cake.	White powder cake.
pH	Limit: 10.0 to 12.0	10.42	10.39	10.37	10.35	10.33
Sterility Test	Should be sterile	Sterile	NA	NA	NA	Sterile
Particulate Matter Test	10 µm : Less than 6000 per container	515.00	NA	NA	NA	725
	25 µm : Less than 600 per container	5.00	NA	NA	NA	40
Water	Not more than 10.0%w/w	1.48 %	1.79 %	1.98 %	2.28 %	2.67 %
Bacterial Endotoxins test	Not more than 8.75 USP EU/mg of Omeprazole Sodium BP	Less than 8.75 USP EU/mg of Omeprazole Sodium BP	NA	NA	NA	Less than 8.75 USP EU/mg of Omeprazole Sodium BP
Related Substances (BY HPLC)	Any Impurity: Not more than 0.1%	0.040 %	0.050 %	0.058 %	0.066 %	0.070 %

	Prepared By	**Approved By**	**Authorized By**
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	Ciron Drugs & Pharmaceuticals Pvt. Ltd. Plot Nos. N-118, 119, MIDC, Tarapur, Dist: Thane. Maharashtra, India Quality Assurance Department	Product Code:8727
	ACCELERATED TERM STABILITY STUDY REPORT	Reference Protocol No.: C1/QA/SSP/8727
	Finished Product Name: OMEPRAZOLE FOR INJECTION	Pharmacopoeial Reference: IHS
	Report No.: C1QA/SSR/8727	Effective Date:28/08/2012
		Page No: 4 of 6

Omeprazole Impurity C (By TLC, UV Visualization, 254 nm)	Any spot with a higher RF value than that of the spot due to omeprazole is not more intense than the spot in the chromatogram obtained with reference solution (b) (0.1 %).	*	*	*	*	*
Assay (By HPLC)	Not less than 90.0% and not more than 110.0 % of Label amount of Omeprazole Sodium BP. (36.0 mg/vial to 44.0 mg/vial)	104.28% 41.71 mg/vial	103.82% 41.53 mg/vial	102.6% 41.04 mg/vial	101.68% 40.67 mg/vial	100.28% 40.11 mg/vial

Conclusion	The Product is found to be stable for 6 months at Accelerated Term study.
NA	Not Applicable
*	One spot with a higher RF value than that of the spot due to omeprazole is not more intense than the spot in the chromatogram obtained with reference solution (b) (Less than 0.1 %).

	Prepared By	Approved By	Authorized By
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CIRON DRUGS & PHARMACEUTICALS PVT. LTD. MUMBAI 400 102.

	Ciron Drugs & Pharmaceuticals Pvt. Ltd. Plot Nos. N-118, 119, MIDC, Tarapur, Dist: Thane. Maharashtra, India Quality Assurance Department	Product Code:8727
ACCELERATED TERM STABILITY STUDY REPORT		Reference Protocol No.: C1/QA/SSP/8727
Finished Product Name: OMEPRAZOLE FOR INJECTION		Pharmacopoeial Reference: IHS
Report No.: C1QA/SSR/8727		Effective Date:28/08/2012
		Page No: 5 of 6

Product Name	:	**OMEPRAZOLE FOR INJECTION**	**Packing**	:	10ml USP type I flint tubular vial,	**Testing Frequency:** Initial, 1, 2, 3 and 6 Months
Batch No.	:	EA04053				
Mfg. Date	:	Feb 2012	**Storage Condition**	:	40°C ± 2° C / 75%RH± 5% RH	
Exp. Date	:	Jan 2014				

Tests	**Specification**	**Intervals in Months**				
		Initial	**1 M**	**2 M**	**3 M**	**6 M**
Description	White to off- white powder cake.	White powder cake.	White powder cake.	White powder cake.	White powder cake.	White powder cake.
pH	Limit: 10.0 to 12.0	10.66	10.63	10.61	10.59	10.57
Sterility Test	Should be sterile	Sterile	NA	NA	NA	Sterile
Particulate Matter Test	10 µm : Less than 6000 per container	537.00	NA	NA	NA	780
	25 µm : Less than 600 per container	8.00	NA	NA	NA	52
Water	Not more than 10.0%w/w	1.39 %	1.60 %	1.91 %	2.34 %	2.71 %
Bacterial Endotoxins test	Not more than 8.75 USP EU/mg of Omeprazole Sodium BP	Less than 8.75 USP EU/mg of Omeprazole Sodium BP	NA	NA	NA	Less than 8.75 USP EU/mg of Omeprazole Sodium BP
Related Substances (BY HPLC)	Any Impurity: Not more than 0.1%	0.035 %	0.041 %	0.049 %	0.052 %	0.056 %

	Prepared By	**Approved By**	**Authorized By**
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Designation	Quality Assurance Executive	Quality Assurance Assistant Manager	Quality Assurance Manager

	Ciron Drugs & Pharmaceuticals Pvt. Ltd. Plot Nos. N-118, 119, MIDC, Tarapur, Dist: Thane. Maharashtra, India Quality Assurance Department	Product Code:8727
	ACCELERATED TERM STABILITY STUDY REPORT	Reference Protocol No.: C1/QA/SSP/8727
	Finished Product Name: OMEPRAZOLE FOR INJECTION	Pharmacopoeial Reference: IHS
	Report No.: C1QA/SSR/8727	Effective Date:28/08/2012
		Page No: 6 of 6

Omeprazole Impurity C (By TLC, UV Visualization, 254 nm)	Any spot with a higher RF value than that of the spot due to omeprazole is not more intense than the spot in the chromatogram obtained with reference solution (b) (0.1 %).	*	*	*	*	*
Assay (By HPLC)	Not less than 90.0% and not more than 110.0 % of Label amount of Omeprazole Sodium BP. (36.0 mg/vial to 44.0 mg/vial)	104.25 % 41.70 mg/vial	103.95% 41.58 mg/vial	102.76% 41.10 mg/vial	101.53% 40.61 mg/vial	100.38% 40.15 mg/vial

Conclusion	The Product is found to be stable for 6 months at Accelerated Term study.
NA	Not Applicable
*	One spot with a higher RF value than that of the spot due to omeprazole is not more intense than the spot in the chromatogram obtained with reference solution (b) (Less than 0.1 %).

	Prepared By	Approved By	Authorized By
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CIRON DRUGS & PHARMACEUTICALS PVT. LTD. MUMBAI 400 102.

2. Estabilidad a tiempo real

	Ciron Drugs & Pharmaceuticals Pvt. Ltd. Plot Nos. N-118, 119, MIDC, Tarapur, Dist: Thane. Maharashtra, India Quality Assurance Department	Product Code:8727
	LONG TERM STABILITY STUDY REPORT	Reference Protocol No.: C1/QA/SSP/8727
	Finished Product Name: OMEPRAZOLE FOR INJECTION	Pharmacopoeial Reference: IHS
	Report No.: C1QA/SSR/8727	Effective Date:27/02/2014
		Page No: 1 of 6

Product Name	:	**OMEPRAZOLE FOR INJECTION**	**Packing**	:	10ml USP type I flint tubular vial	**Testing Frequency:** Initial, 3, 6, 9, 12, 18,24 Months
Batch No.	:	EA02051				
Mfg. Date	:	Feb 2012	**Storage Condition**	:	30°C ± 2° C / 65%RH± 5% RH	
Exp. Date	:	Jan 2014				

Tests	**Specification**	**Intervals in Months**						
		Initial	**3 M**	**6 M**	**9 M**	**12 M**	**18 M**	**24 M**
Description	White to off- white powder cake.	White powder cake.	White powder cake.	White powder cake.	White powder cake.	White powder cake.	White powder cake.	White powder cake.
pH	Limit: 10.0 to 12.0	10.55	10.53	10.51	10.49	10.47	10.45	10.43
Sterility Test	Should be sterile	Sterile	NA	NA	NA	NA	NA	Sterile
Particulate Matter Test	10 µm : Less than 6000 per container	500.00	NA	NA	NA	NA	NA	700.00
	25 µm : Less than 600 per container	7.00	NA	NA	NA	NA	NA	45.00
Water	Not more than 10.0%w/w	1.54 %	1.78 %	1.94 %	2.27 %	2.46 %	2.81 %	3.05 %
Bacterial Endotoxins test	Not more than 8.75 USP EU/mg of Omeprazole Sodium BP	Less than 8.75 USP EU/mg of Omeprazole Sodium BP	NA	NA	NA	NA	NA	Less than 8.75 USP EU/mg of Omeprazole Sodium BP
Related substances (BY HPLC)	Any Impurity: Not more than 0.1%	0.042 %	0.045 %	0.049 %	0.052 %	0.056 %	0.060 %	0.068 %

	Prepared By	**Approved By**	**Authorized By**
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	Ciron Drugs & Pharmaceuticals Pvt. Ltd. Plot Nos. N-118, 119, MIDC, Tarapur, Dist: Thane. Maharashtra, India Quality Assurance Department	Product Code:8727
	LONG TERM STABILITY STUDY REPORT	Reference Protocol No.: C1/QA/SSP/8727
		Pharmacopoeial Reference: IHS
Finished Product Name: OMEPRAZOLE FOR INJECTION		Effective Date:27/02/2014
Report No.: C1QA/SSR/8727		Page No: 2 of 6

Omeprazole Impurity C (By TLC, UV Visualization, 254 nm)	Any spot with a higher RF value than that of the spot due to omeprazole is not more intense than the spot in the chromatogram obtained with reference solution (b) (0.1 %)	*	*	*	*	*	*	*
Assay (By HPLC)	Not less than 90.0% and not more than 110.0 % of Label amount of Omeprazole Sodium BP. (36.0 mg/vial to 44.0 mg/vial)	104.16% 41.66 mg/vial	103.86% 41.54 mg/vial	103.16% 41.26 mg/vial	102.55% 41.02 mg/vial	101.49% 40.60 mg/vial	100.78% 40.31 mg/vial	99.48% 39.79 mg/vial

Conclusion	The Product is found to be stable for 24 months at Long Term study.
NA	Not Applicable
*	One spot with a higher RF value than that of the spot due to omeprazole is not more intense than the spot in the chromatogram obtained with reference solution (b) (Less than 0.1 %).

	Prepared By	Approved By	Authorized By
Sign & Date	27/02/14	27/02/2014	27/02/14
Name	Mr. Jayvant Patil	Mr. Sushant Kumar Gantayat	Mr. Gopichand Chaphekanade
Designation	Quality Assurance Executive	Quality Assurance Assistant Manager	Quality Assurance Manager

	Ciron Drugs & Pharmaceuticals Pvt. Ltd. Plot Nos. N-118, 119, MIDC, Tarapur, Dist: Thane. Maharashtra, India Quality Assurance Department	Product Code:8727
		Reference Protocol No.: C1/QA/SSP/8727
LONG TERM STABILITY STUDY REPORT		Pharmacopoeial Reference: IHS
Finished Product Name: OMEPRAZOLE FOR INJECTION		Effective Date:27/02/2014
Report No.: C1QA/SSR/8727		Page No: 3 of 6

Product Name	:	**OMEPRAZOLE FOR INJECTION**	**Packing**	:	10ml USP type I flint tubular vial	**Testing Frequency:** Initial, 3, 6, 9, 12, 18,24 Months	
Batch No.	:	EA03052					
Mfg. Date	:	Feb 2012	**Storage Condition**	:	30°C ± 2° C / 65%RH± 5% RH		
Exp. Date	:	Jan 2014					

Tests	**Specification**	**Intervals in Months**						
		Initial	**3 M**	**6 M**	**9 M**	**12 M**	**18 M**	**24 M**
Description	White to off- white powder cake.	White powder cake.	White powder cake.	White powder cake.	White powder cake.	White powder cake.	White powder cake.	White powder cake.
pH	Limit: 10.0 to 12.0	10.42	10.4	10.38	10.36	10.34	10.32	10.3
Sterility Test	Should be sterile	Sterile	NA	NA	NA	NA	NA	Sterile
Particulate Matter Test	10 µm : Less than 6000 per container	515.00	NA	NA	NA	NA	NA	680.00
	25 µm : Less than 600 per container	5.00	NA	NA	NA	NA	NA	38.00
Water	Not more than 10.0%w/w	1.48 %	1.69 %	1.82 %	2.18 %	2.59 %	2.87 %	2.97 %
Bacterial Endotoxins test	Not more than 8.75 USP EU/mg of Omeprazole Sodium BP	Less than 8.75 USP EU/mg of Omeprazole Sodium BP	NA	NA	NA	NA	NA	Less than 8.75 USP EU/mg of Omeprazole Sodium BP
Related Substances (BY HPLC)	Any Impurity: Not more than 0.1%	0.040 %	0.044 %	0.048 %	0.053 %	0.058 %	0.062 %	0.069 %

	Prepared By	**Approved By**	**Authorized By**
Sign & Date	27/02/14	27/02/2014	27/02/2014
Name	Mr. Jayvant Patil	Mr. Sushant Kumar Gantayat	Mr. Gopichand Chaphekanade
Designation	Quality Assurance Executive	Quality Assurance Assistant Manager	Quality Assurance Manager

	Ciron Drugs & Pharmaceuticals Pvt. Ltd. Plot Nos. N-118, 119, MIDC, Tarapur, Dist: Thane. Maharashtra, India Quality Assurance Department	Product Code:8727
	LONG TERM STABILITY STUDY REPORT	Reference Protocol No.: C1/QA/SSP/8727
	Finished Product Name: OMEPRAZOLE FOR INJECTION	Pharmacopoeial Reference: IHS
	Report No.: C1QA/SSR/8727	Effective Date:27/02/2014
		Page No: 4 of 6

Omeprazole Impurity C (By TLC, UV Visualization, 254 nm)	Any spot with a higher RF value than that of the spot due to omeprazole is not more intense than the spot in the chromatogram obtained with reference solution (b) (0.1 %).	*	*	*	*	*	*	*
Assay (By HPLC)	Not less than 90.0% and not more than 110.0 % of Label amount of Omeprazole Sodium BP. (36.0 mg/vial to 44.0 mg/vial)	104.28% 41.71 mg/vial	103.97 % 41.59 mg/vial	103.59% 41.44 mg/vial	102.43% 40.97 mg/vial	101.67% 40.67 mg/vial	100.53% 40.21 mg/vial	99.52% 39.81 mg/vial

Conclusion	The Product is found to be stable for 24 months at Long Term study.
NA	Not Applicable
*	One spot with a higher RF value than that of the spot due to omeprazole is not more intense than the spot in the chromatogram obtained with reference solution (b) (Less than 0.1 %).

	Prepared By	Approved By	Authorized By
Sign & Date	Jpatil 27/02/14	Sushant 27/02/2014	Gopichand 27/02/14
Name	Mr. Jayvant Patil	Mr. Sushant Kumar Gantayat	Mr. Gopichand Chaphekanade
Designation	Quality Assurance Executive	Quality Assurance Assistant Manager	Quality Assurance Manager

	Ciron Drugs & Pharmaceuticals Pvt. Ltd. Plot Nos. N-118, 119, MIDC, Tarapur, Dist: Thane. Maharashtra, India Quality Assurance Department	Product Code:8727
	LONG TERM STABILITY STUDY REPORT	Reference Protocol No.: C1/QA/SSP/8727
	Finished Product Name: OMEPRAZOLE FOR INJECTION	Pharmacopoeial Reference: IHS
	Report No.: C1QA/SSR/8727	Effective Date:27/02/2014
		Page No: 5 of 6

Product Name	:	**OMEPRAZOLE FOR INJECTION**	**Packing**	:	10ml USP type I flint tubular vial	**Testing Frequency:** Initial, 3, 6, 9, 12, 18,24 Months	
Batch No.	:	EA04053					
Mfg. Date	:	Feb 2012	**Storage Condition**	:	30°C ± 2° C / 65%RH± 5% RH		
Exp. Date	:	Jan 2014					

Tests	**Specification**	**Intervals in Months**						
		Initial	**3 M**	**6 M**	**9 M**	**12 M**	**18 M**	**24 M**
Description	White to off- white powder cake.	White powder cake.	White powder cake.	White powder cake.	White powder cake.	White powder cake.	White powder cake.	White powder cake.
pH	Limit: 10.0 to 12.0	10.66	10.64	10.62	10.6	10.58	10.56	10.54
Sterility Test	Should be sterile	Sterile	NA	NA	NA	NA	NA	Sterile
Particulate Matter Test	10 µm : Less than 6000 per container	537.00	NA	NA	NA	NA	NA	715.00
	25 µm : Less than 600 per container	8.00	NA	NA	NA	NA	NA	49.00
Water	Not more than 10.0%w/w	1.39 %	1.53 %	1.85 %	2.20 %	2.57 %	2.79 %	2.92 %
Bacterial Endotoxins test	Not more than 8.75 USP EU/mg of Omeprazole Sodium BP	Less than 8.75 USP EU/mg of Omeprazole Sodium BP	NA	NA	NA	NA	NA	Less than 8.75 USP EU/mg of Omeprazole Sodium BP
Related Substances (BY HPLC)	Any Impurity: Not more than 0.1%	0.035 %	0.039 %	0.046 %	0.050 %	0.055 %	0.059 %	0.065 %

	Prepared By	**Approved By**	**Authorized By**
Sign & Date	27/02/14	27/02/2014	27/02/2014
Name	Mr. Jayvant Patil	Mr. Sushant Kumar Gantayat	Mr. Gopichand Chaphekanade
Designation	Quality Assurance Executive	Quality Assurance Assistant Manager	Quality Assurance Manager

	Ciron Drugs & Pharmaceuticals Pvt. Ltd. Plot Nos. N-118, 119, MIDC, Tarapur, Dist: Thane. Maharashtra, India Quality Assurance Department	Product Code:8727
	LONG TERM STABILITY STUDY REPORT	Reference Protocol No.: C1/QA/SSP/8727
		Pharmacopoeial Reference: IHS
Finished Product Name: OMEPRAZOLE FOR INJECTION		Effective Date:27/02/2014
Report No.: C1QA/SSR/8727		Page No: 6 of 6

Omeprazole Impurity C (By TLC, UV Visualization, 254 nm)	Any spot with a higher RF value than that of the spot due to omeprazole is not more intense than the spot in the chromatogram obtained with reference solution (b) (0.1 %).	*	*	*	*	*	*	*
Assay (By HPLC)	Not less than 90.0% and not more than 110.0 % of Label amount of Omeprazole Sodium BP. (36.0 mg/vial to 44.0 mg/vial)	104.25 % 41.70 mg/vial	103.90 % 41.56 mg/vial	103.29% 41.32 mg/vial	102.38 % 40.95 mg/vial	101.52% 40.61 mg/vial	100.62% 40.25 mg/vial	99.55% 39.82 mg/vial

Conclusion	The Product is found to be stable for 24 months at Long Term study.
NA	Not Applicable
*	One spot with a higher RF value than that of the spot due to omeprazole is not more intense than the spot in the chromatogram obtained with reference solution (b) (Less than 0.1 %).

	Prepared By	Approved By	Authorized By
Sign & Date	27/02/14	27/02/2014	27/02/14
Name	Mr. Jayvant Patil	Mr. Sushant Kumar Gantayat	Mr. Gopichand Chaphekanade
Designation	Quality Assurance Executive	Quality Assurance Assistant Manager	Quality Assurance Manager

IV. DISCUSIÓN

De acuerdo a los resultados obtenidos en el Estudio de Estabilidad, tanto Acelerado como a Tiempo Real de los lotes EA02051, EA03052 y EA04053, se puede verificar que los lotes estudiados no muestran deterioro físico o químico en el envase utilizado (vial de vidrio USP tipo I de 10 mL con tapón de goma bromobutilo y sello de aluminio tipo flip off) y los parámetros analizados se mantuvieron dentro de los límites especificados, durante 24 meses en el estudio a tiempo real y durante 6 meses en el estudio acelerado.

V. ESPECIFICACIÓN PARA LA VIDA ÚTIL

Basado en los datos adquiridos de los estudios de estabilidad a tiempo real y acelerado, se propone periodo de eficacia para IMAROZ liofilizado para solución inyectable 40 mg, sellado sin reconstituir, en su envase original (vial de vidrio USP tipo I de 10 mL con tapón de goma bromobutilo y sello de aluminio tipo flip off) de 24 meses a partir de su fecha de fabricación almacenado a una temperatura ambiente no mayor a 30°C, protegido de la luz.

ESTUDIO DE ESTABILIDAD DEL FRASCO AMPOLLA CON SOLVENTE

PROTOCOLO

I. PROTOCOLO

Se realizó una evaluación de la estabilidad de tres lotes del solvente agua para inyectable fabricados por Amanta Healthcare Ltd. ubicado en Plot No. 876, N.H. No. 8, Village Hariyala, Tal-Matar, Hariyala-387 411, Dist Kheda, Gujarat State, India. El estudio se llevará a cabo a dos tiempos y condiciones ambientales.

A continuación los lotes a analizar:

Número de lote	Fecha de manufactura	Tamaño de lote
2T543064	05/2013	440 Frascos ampolla
2T543065	05/2013	440 Frascos ampolla
2T543066	05/2013	440 Frascos ampolla

1. Condiciones

El estudio se realizó almacenando muestras, en las siguientes condiciones de temperatura y humedad relativa:

	Estudio Acelerado	Estudio a tiempo real
Temperatura	40 ºC ± 2 ºC	25ºC ± 2 ºC
Humedad	75 ± 5 % H. R.	60 ± 5 % H. R

2. Tipo de envase

Cada combipack contiene:

- Vial con liofilizado: Vial de vidrio USP tipo I de 10 mL
- Frasco ampolla con solvente: Frasco ampolla de plástico de polietileno de baja densidad (LDPE BB120) de 10 mL.

3. Fecha de inicio y fin del estudio de estabilidad

- Fecha de inicio: El estudio dio inicio en Mayo del 2013
- Fecha de término: El estudio finalizará en Mayo del 2017

4. Análisis realizados y frecuencia de testeo:

a. Parámetros analizados del frasco ampolla con liofilizado:

Test	Especificaciones
Descripción	Líquido claro y sin color.
Volumen extraíble	El volumen de cada frasco ampolla no es menor que el volumen nominal y no más del 110% del volumen nominal
Acidez / Alcalinidad	Si la solución es amarilla, se vuelve roja por la adición de 0,1 mL de hidróxido de sodio 0,01 M; si es roja, se vuelve amarilla por la adición de 0,15 mL de ácido clorhídrico 0,01 M.
Conductividad	Máximo 25 µS/cm a 25°C ± 1°C
Sustancias oxidables	La solución permanece débilmente rosada
Cloruros	Máximo 0,5 ppm
Nitratos	Máximo 0,2 ppm
Sulfatos	La solución no muestra cambio de apariencia por al menos 1 hora.
Amonio	Para recipientes con un volumen nominal inferior a 50 mL: Máximo 0,6 ppm
Calcio y Magnesio	Se produce un color azul puro.
Residuo de evaporación	Para volumen ≤ 10 mL: Máximo 4 mg (0,004%)
Material particulado	≥ 10 µm: menos que 6000 por frasco ampolla ≥ 25 µm: menos que 600 por frasco ampolla
Esterilidad	Debe ser estéril
Endotoxinas Bacterianas	No más de 0,25 UI/mL
Calcio	No se observa turbidez
Dióxido de carbono	La mezcla permanece clara
pH	5,0 - 7,0 (25°C ± 2°C)
Metales pesados	No más de 0,1 ppm

b. Estudio acelerado

Parámetros medidos	Inicial	3 M	6 M
Descripción	√	√	√
Volumen extraíble	√	√	√
Acidez / Alcalinidad	√	√	√
Conductividad	√	√	√
Sustancias oxidables	√	√	√
Cloruros	√	√	√
Nitratos	√	√	√
Sulfatos	√	√	√
Amonio	√	√	√
Metales pesados	√	√	√

Calcio y Magnesio	√	√	√
Residuo de evaporación	√	√	√
Material particulado	√	√	√
Esterilidad	√	√	√
Endotoxinas Bacterianas	√	√	√
Calcio	√	√	√
Dióxido de carbono	√	√	√
pH	√	√	√
Metales pesados	√	√	√

Estudio a tiempo real

Parámetros medidos	**Inicial**	**3 M**	**6 M**	**9 M**	**12 M**	**18 M**	**24 M**	**36 M**	**48 M**
Descripción	√	√	√	√	√	√	√	√	
Volumen extraíble	√	√	√	√	√	√	X	X	
Acidez / Alcalinidad	√	√	√	√	√	√	√	√	
Conductividad	√	√	√	√	√	√	√	√	
Sustancias oxidables	√	√	√	√	√	√	√	√	
Cloruros	√	√	√	√	√	√	√	√	
Nitratos	√	√	√	√	√	√	√	√	
Sulfatos	√	√	√	√	√	√	√	√	
Amonio	√	√	√	√	√	√	√	√	
Metales pesados	√	√	√	√	√	√	√	√	
Calcio y Magnesio	√	√	√	√	√	√	√	√	
Residuo de evaporación	√	√	√	√	√	√	√	√	
Material particulado	√	X	X	X	√	X	√	√	
Esterilidad	√	X	X	X	√	X	√	√	
Endotoxinas Bacterianas	√	X	X	X	√	X	√	√	
Calcio	√	√	√	√	√	√	√	√	
Dióxido de carbono	√	√	√	√	√	√	√	√	
pH	√	√	√	√	√	√	√	√	
Metales pesados	√	√	√	√	√	√	√	√	

NOTA: √ = Parámetro debe ser medido. X = Parámetro NO debe ser medido.

Cabe destacar que la metodología utilizada para la medición de los diferentes parámetros en el estudio de estabilidad del solvente agua para inyectables es la misma declarada en la metodología original para el análisis del producto terminado.

A. Especificaciones del producto terminado

b. Especificaciones de frasco ampolla con solvente

Test	Especificaciones	Método
Descripción	Líquido claro y sin color.	Inspección visual
Acidez / Alcalinidad	Si la solución es amarillo cambia de color a rojo al añadir 0,1 mL de NaOH 0,01 M; si es roja cambia a amarilla al añadir 0,15 mL de ácido clorhídrico 0,01 M.	BP
Conductividad	< 25 µS/cm a 25°C ± 1°C.	BP
Sustancia oxidables	La solución se mantiene ligeramente rosada.	BP
Cloruros	Para volumen ≤ 100 mL: Máximo 0,5 ppm Para volumen > 100 mL: La solución no cambia en apariencia por al menos 15 minutos.	BP
Nitratos	Máximo 0,2 ppm	BP
Sulfatos	La solución no cambia de apariencia por al menos 1 hora.	BP
Amonio	Para volumen ≤50 mL: Máximo 0,6 ppm Para volumen >50 mL: Máximo 0,2 ppm	BP
Calcio y magnesio	Se produce un color azul puro.	BP
Material particulado	≥ 10 µm: menos que 6000 por frasco ≥ 25 µm: menos que 600 por frasco	BP
Esterilidad	Debe ser estéril.	BP
Endotoxinas Bacterianas	No más de 0,25 UI/mL	BP
Volumen extraíble	El volumen de cada frasco ampolla no es menor que el volumen nominal.	BP
pH	5,0 – 7,0	IH
Residuo de evaporación	No más de 0,004%	BP
Material de envase empaque	Frasco ampolla plástico de polietileno de baja densidad (LDPE BB 120). Combipack contiene además vial de vidrio con liofilizado y folleto de información.	Inspección visual

II. FÓRMULA CUALI-CUANTITA

Cada frasco ampolla con solvente contiene:

Ingrediente	Cantidad total (mL)	Función	Especificaciones
Agua estéril para inyectables	10	Solvente	British Pharmacopea

ESTUDIO DE ESTABILIDAD DEL FRASCO AMPOLLA CON SOLVENTE

TABLAS DE RESULTADOS

III. TABLAS DE RESULTADOS

1. Estudio de estabilidad acelerado

Amanta

Amanta Healthcare Limited, Kheda.			
Accelerated Stability Study Data			
PRODUCT NAME	**STERILISED WATER FOR INJECTIONS BP**		
BATCH NO.	**2T543064**	**BATCH SIZE**	**4400 Litre**
MFG. DATE	**MAY-2013**	**PACK SIZE**	**10 mL**
EXP.DATE	**APR-2017**	**CONDITIONS**	**40 ± 2°C / 75 ± 5% RH**
TYPE OF PLASTIC USED	**LDPE BB120**	**KEPT ON DATE**	**05/05/13**
			Page No. : 1 of 3

Test	Limit	Initial	3 Months	6 Months
Appearance	A clear and colorless solution	A clear and colorless solution	A clear and colorless solution	A clear and colorless solution
Extractable Volume	Not less than nominal volume and not more than 110% of the nominal volume.	10.4 mL	10.2 mL	10.2 mL
Acidity or Alkalinity	If the solution is yellow, it becomes red on the addition of 0.1 mL of 0.01 M sodium hydroxide; if red, it becomes yellow on the addition of 0.15 mL of 0.01 M hydrochloric acid	The solution is Yellow,it becomes red on the addition of 0.1 ml of 0.01 M sodium hydroxide.	The solution is Yellow,it becomes red on the addition of 0.1 ml of 0.01 M sodium hydroxide.	The solution is Yellow,it becomes red on the addition of 0.1 ml of 0.01 M sodium hydroxide.
Conductivity	Maximum 25 $\mu s.cm^{-1}$ for containers with a nominal volume of 10 mL or less at 25 °C ± 1 °C	1.151 $\mu s.cm^{-1}$	1.732 $\mu s.cm^{-1}$	5.978 $\mu s.cm^{-1}$
Oxidisable Substances	The solution remains faintly pink	The solution remains faintly pink	The solution remains faintly pink	The solution remains faintly pink
Chlorides	Maximum 0.5 ppm	<0.5 ppm	<0.5 ppm	<0.5 ppm

Prepared By: Kamlesh Patel	**Checked By:** Nipul Rangpura	**Reviewed By(RA):** Darshi Shah	**Reviewed By(QA):** Chetan Dave
Sign.	**Sign.**	**Sign.**	**Sign.**
Date 26/11/15	**Date** 26/11/15	**Date** 02/12/15	**Date** 02/12/15

Format No. :CB2015/F10-00

Amanta

Amanta Healthcare Limited, Kheda.			
Accelerated Stability Study Data			
PRODUCT NAME	**STERILISED WATER FOR INJECTIONS BP**		
BATCH NO.	**2T543064**	**BATCH SIZE**	**4400 Litre**
MFG. DATE	**MAY-2013**	**PACK SIZE**	**10 mL**
EXP.DATE	**APR-2017**	**CONDITIONS**	**40 ± 2°C / 75 ± 5% RH**
TYPE OF PLASTIC USED	**LDPE BB120**	**KEPT ON DATE**	**05/05/13**
			Page No. : 2 of 3

Test	Limit	Initial	3 Months	6 Months
Nitrates	Maximum 0.2 ppm	<0.2 ppm	<0.2 ppm	<0.2 ppm
Sulfates	The solution shows no change in appearance for at least 1 h.	The solution shows no change in appearance for at least 1 h.	The solution shows no change in appearance for at least 1 h.	The solution shows no change in appearance for at least 1 h.
Ammonium	For containers with a nominal volume less than 50 mL: Maximum 0.6 ppm	<0.6 ppm	<0.6 ppm	<0.6 ppm
Calcium and Magnesium	A pure blue colour should be produced	A pure blue colour is produced	A pure blue colour is produced	A pure blue colour is produced
Residue on Evaporation	Maximum 4 mg (0.004 per cent) for containers with a nominal volume of 10 mL or less.	0.0005%	0.0002%	0.0002%
Particulate contamination: Sub-visible particles	Average particles not more than 6000 per container equal to or greater than 10 µm and not more than 600 per container equal to or greater than 25 µm	23 03	263 107	07 0.67
Sterility	Should be sterile	sterile	sterile	sterile
Bacterial Endotoxins	Not more than 0.25 IU/mL	<0.25 IU/mL	<0.25 IU/mL	<0.25 IU/mL

Prepared By: Ramesh Patel	Checked By: Nimit Rana	Reviewed By(RA): DEVANSHI SHAH	Reviewed By(QA): Chetan Dave
Sign.	Sign.	Sign.	Sign.
Date 26/11/15	Date 26/11/15	Date 02/12/15	Date 02/12/15

Format No. :CB2015/F10-00

Amanta

Amanta Healthcare Limited, Kheda.

Accelerated Stability Study Data

PRODUCT NAME	**STERILISED WATER FOR INJECTIONS BP**		
BATCH NO.	**2T543064**	**BATCH SIZE**	**4400 Litre**
MFG. DATE	**MAY-2013**	**PACK SIZE**	**10 mL**
EXP.DATE	**APR-2017**	**CONDITIONS**	**40 ± 2°C / 75 ± 5% RH**
TYPE OF PLASTIC USED	**LDPE BB120**	**KEPT ON DATE**	**05/05/13**

Page No. : 3 of 3

Test	Limit	Initial	3 Months	6 Months
Calcium	No turbidity should be produced	No turbidity is produced	No turbidity is produced	No turbidity is produced
Carbon Dioxide	The mixture remains clear	The mixture remains clear	The mixture remains clear	The mixture remains clear
pH	Between 5.0 and 7.0 at 25 °C ± 2 °C	5.89	6.28	5.06
Heavy metals	Not more than 0.1 ppm	<0.1 ppm	<0.1 ppm	<0.1 ppm

Conclusion: Product is stable up to 6 months when charged at Accelerated condition.

Prepared By:	Checked By:	Reviewed By(RA):	Reviewed By(QA):
Sign.	Sign.	Sign.	Sign.
Date 26/11/15	Date 26/11/15	Date 02/12/15	Date 02/12/15

Format No. :CB2015/F10-00

Amanta

Amanta Healthcare Limited, Kheda.

Accelerated Stabllity Study Data

PRODUCT NAME	**STERILISED WATER FOR INJECTIONS BP**		
BATCH NO.	**2T543065**	**BATCH SIZE**	**4400 Litre**
MFG. DATE	**MAY-2013**	**PACK SIZE**	**10 mL**
EXP.DATE	**APR-2017**	**CONDITIONS**	**40 ± 2°C / 75 ± 5% RH**
TYPE OF PLASTIC USED	**LDPE BB120**	**KEPT ON DATE**	**05/05/13**

Test	Limit	Initial	3 Months	6 Months
Appearance	A clear and colorless solution	A clear and colorless solution	A clear and colorless solution	A clear and colorless solution
Extractable Volume	Not less than nominal volume and not more than 110% of the nominal volume.	10.3 mL	10.1 mL	10.2 mL
Acidity or Alkalinity	If the solution is yellow, it becomes red on the addition of 0.1 mL of 0.01 M sodium hydroxide; if red, it becomes yellow on the addition of 0.15 mL of 0.01 M hydrochloric acid	The solution is Yellow,it becomes red on the addition of 0.1 ml of 0.01 M sodium hydroxide.	The solution is Yellow,it becomes red on the addition of 0.1 ml of 0.01 M sodium hydroxide.	The solution is Yellow,it becomes red on the addition of 0.1 ml of 0.01 M sodium hydroxide.
Conductivity	Maximum 25 $\mu s.cm^{-1}$ for containers with a nominal volume of 10 mL or less at 25 °C ± 1 °C	1.618 $\mu s.cm^{-1}$	1.639 $\mu s.cm^{-1}$	5.552 $\mu s.cm^{-1}$
Oxidisable Substances	The solution remains faintly pink	The solution remains faintly pink	The solution remains faintly pink	The solution remains faintly pink
Chlorides	Maximum 0.5 ppm	<0.5 ppm	<0.5 ppm	<0.5 ppm

Prepared By: Ramesh Patel	**Checked By:** Nirav Rajyaguru	**Reviewed By(RA):** Dhananjay Shah	**Reviewed By(QA):** Chetan Dave
Sign.	**Sign.**	**Sign.**	**Sign.**
Date 26/11/15	**Date** 26/11/15	**Date** 02/12/15	**Date** 02/12/15

Format No. :CB2015/F10-00

Amanta

Amanta Healthcare Limited, Kheda.

Accelerated Stability Study Data

PRODUCT NAME	**STERILISED WATER FOR INJECTIONS BP**		
BATCH NO.	**2T543065**	**BATCH SIZE**	**4400 Litre**
MFG. DATE	**MAY-2013**	**PACK SIZE**	**10 mL**
EXP.DATE	**APR-2017**	**CONDITIONS**	**40 ± 2°C / 75 ± 5% RH**
TYPE OF PLASTIC USED	**LDPE BB120**	**KEPT ON DATE**	**05/05/13**

Page No. : 2 of 3

Test	Limit	Initial	3 Months	6 Months
Nitrates	Maximum 0.2 ppm	<0.2 ppm	<0.2 ppm	<0.2 ppm
Sulfates	The solution shows no change in appearance for at least 1 h.	The solution shows no change in appearance for at least 1 hour.	The solution shows no change in appearance for at least 1 hour.	The solution shows no change in appearance for at least 1 hour.
Ammonium	For containers with a nominal volume less than 50 mL: Maximum 0.6 ppm	<0.6 ppm	<0.6 ppm	<0.6 ppm
Calcium and Magnesium	A pure blue colour should be produced	A pure blue colour is produced	A pure blue colour is produced	A pure blue colour is produced
Residue on Evaporation	Maximum 4 mg (0.004 per cent) for containers with a nominal volume of 10 mL or less.	0.0003%	0.0003%	0.0006%
Particulate contamination: Sub-visible particles	Average particles not more than 6000 per container equal to or greater than 10 µm and not more than 600 per container equal to or greater than 25 µm	59 12	23 04	05 0.67
Sterility	Should be sterile	sterile	sterile	sterile
Bacterial Endotoxins	Not more than 0.25 IU/mL	<0.25 IU/mL	<0.25 IU/mL	<0.25 IU/mL

Prepared By: Kamlesh Rathi **Sign.** **Date** 26/11/15	**Checked By:** Nipun Rastogi **Sign.** **Date** 26/11/15	**Reviewed By(RA):** Devanshi Shah **Sign.** **Date** 02/12/15	**Reviewed By(QA):** Chetan Dave **Sign.** **Date** 02/12/15

Format No. :CB2015/F10-00

Amanta

Amanta Healthcare Limited, Kheda.			
Accelerated Stability Study Data			
PRODUCT NAME	**STERILISED WATER FOR INJECTIONS BP**		
BATCH NO.	**2T543065**	**BATCH SIZE**	**4400 Litre**
MFG. DATE	**MAY-2013**	**PACK SIZE**	**10 mL**
EXP.DATE	**APR-2017**	**CONDITIONS**	**40 ± 2°C / 75 ± 5% RH**
TYPE OF PLASTIC USED	**LDPE BB120**	**KEPT ON DATE**	**05/05/13**

Page No. : 3 of 3

Test	Limit	Initial	3 Months	6 Months
Calcium	No turbidity should be produced	No turbidity is produced	No turbidity is produced	No turbidity is produced
Carbon Dioxide	The mixture remains clear	The mixture remains clear	The mixture remains clear	The mixture remains clear
pH	Between 5.0 and 7.0 at 25 °C ± 2 °C	5.86	5.76	5.24
Heavy metals	Not more than 0.1 ppm	<0.1 ppm	<0.1 ppm	<0.1 ppm
Conclusion: Product is stable up to 6 months when charged at Accelerated condition.				

Prepared By:	Checked By:	Reviewed By(RA): DEVANSHI SHAH	Reviewed By(QA): Chetan Dan
Sign.	Sign.	Sign.	Sign.
Date 26/11/15	Date 26/11/15	Date 02/12/15	Date 02/12/15

Format No. :CB2015/F10-00

Amanta

Amanta Healthcare Limited, Kheda.

Accelerated Stability Study Data

PRODUCT NAME	**STERILISED WATER FOR INJECTIONS BP**		
BATCH NO.	**2T543066**	**BATCH SIZE**	**4400 Litre**
MFG. DATE	**MAY-2013**	**PACK SIZE**	**10 mL**
EXP.DATE	**APR-2017**	**CONDITIONS**	**40 ± 2°C / 75 ± 5% RH**
TYPE OF PLASTIC USED	**LDPE BB120**	**KEPT ON DATE**	**05/05/13**

Test	Limit	Initial	3 Months	6 Months
Appearance	A clear and colorless solution	A clear and colorless solution	A clear and colorless solution	A clear and colorless solution
Extractable Volume	Not less than nominal volume and not more than 110% of the nominal volume .	10.2 mL	10.1 mL	10.2 mL
Acidity or Alkalinity	If the solution is yellow, it becomes red on the addition of 0.1 mL of 0.01 M sodium hydroxide; if red, it becomes yellow on the addition of 0.15 mL of 0.01 M hydrochloric acid	The solution is Yellow,it becomes red on the addition of 0.1 ml of 0.01 M sodium hydroxide.	The solution is Yellow,it becomes red on the addition of 0.1 ml of 0.01 M sodium hydroxide.	The solution is Yellow,it becomes red on the addition of 0.1 ml of 0.01 M sodium hydroxide.
Conductivity	Maximum 25 $\mu s.cm^{-1}$ for containers with a nominal volume of 10 mL or less at 25 °C ± 1 °C	1.657 $\mu s.cm^{-1}$	1.761 $\mu s.cm^{-1}$	5.506 $\mu s.cm^{-1}$
Oxidisable Substances	The solution remains faintly pink	The solution remains faintly pink	The solution remains faintly pink	The solution remains faintly pink
Chlorides	Maximum 0.5 ppm	<0.5 ppm	<0.5 ppm	<0.5 ppm

Prepared By:	Checked By:	Reviewed By(RA):	Reviewed By(QA):
Sign.	Sign.	Sign.	Sign.
Date 2/11/15	Date 2/1/15	Date 02/12/15	Date 02/12/15

Format No. :CB2015/F10-00

Amanta

Amanta Healthcare Limited, Kheda.

Accelerated Stability Study Data

PRODUCT NAME	**STERILISED WATER FOR INJECTIONS BP**		
BATCH NO.	**2T543066**	**BATCH SIZE**	**4400 Litre**
MFG. DATE	**MAY-2013**	**PACK SIZE**	**10 mL**
EXP.DATE	**APR-2017**	**CONDITIONS**	**40 ± 2°C / 75 ± 5% RH**
TYPE OF PLASTIC USED	**LDPE BB120**	**KEPT ON DATE**	**05/05/13**

Page No. : 2 of 3

Test	Limit	Initial	3 Months	6 Months
Nitrates	Maximum 0.2 ppm	<0.2 ppm	<0.2 ppm	<0.2 ppm
Sulfates	The solution shows no change in appearance for at least 1 h.	The solution shows no change in appearance for at least 1 h.	The solution shows no change in appearance for at least 1 h.	The solution shows no change in appearance for at least 1 h.
Ammonium	For containers with a nominal volume less than 50 mL: Maximum 0.6 ppm	<0.6 ppm	<0.6 ppm	<0.6 ppm
Calcium and Magnesium	A pure blue colour should be produced	A pure blue colour is produced	A pure blue colour is produced	A pure blue colour is produced
Residue on Evaporation	Maximum 4 mg (0.004 per cent) for containers with a nominal volume of 10 mL or less.	0.0006%	0.0003%	0.0004%
Particulate contamination: Sub-visible particles	Average particles not more than 6000 per container equal to or greater than 10 µm and not more than 600 per container equal to or greater than 25 µm	48 8	44 24	29 02
Sterility	Should be sterile	sterile	sterile	sterile
Bacterial Endotoxins	Not more than 0.25 IU/mL	<0.25 IU/mL	<0.25 IU/mL	<0.25 IU/mL

Prepared By: [illegible]	**Checked By:** Nipul Rajyaguru	**Reviewed By(RA):** DEVANSHI SHAH	**Reviewed By(QA):** Chetan Dave
Sign.	**Sign.**	**Sign.**	**Sign.**
Date 26/11/15	**Date** 26/11/15	**Date** 02/12/15	**Date** 02/12/15

Format No. :CB2015/F10-00

Amanta

Amanta Healthcare Limited, Kheda.			
Accelerated Stability Study Data			
PRODUCT NAME	**STERILISED WATER FOR INJECTIONS BP**		
BATCH NO.	**2T543066**	**BATCH SIZE**	**4400 Litre**
MFG. DATE	**MAY-2013**	**PACK SIZE**	**10 mL**
EXP.DATE	**APR-2017**	**CONDITIONS**	**40 ± 2°C / 75 ± 5% RH**
TYPE OF PLASTIC USED	**LDPE BB120**	**KEPT ON DATE**	**05/05/13**

Page No. : 3 of 3

Test	Limit	Initial	3 Months	6 Months
Calcium	No turbidity should be produced	No turbidity is produced	No turbidity is produced	No turbidity is produced
Carbon Dioxide	The mixture remains clear	The mixture remains clear	The mixture remains clear	The mixture remains clear
pH	Between 5.0 and 7.0 at 25 °C ± 2 °C	6.09	5.74	5.08
Heavy metals	Not more than 0.1 ppm	<0.1 ppm	<0.1 ppm	<0.1 ppm
Conclusion: Product is stable up to 6 months when charged at Accelerated condition.				

Prepared By:	Checked By:	Reviewed By(RA):	Reviewed By(QA):
Sign.	Sign.	Sign.	Sign.
Date 26/11/15	Date 26/11/15	Date 02/12/15	Date 02/12/15

Format No. :CB2015/F10-00

2. Estudio de estabilidad a tiempo real

Amanta

Amanta Healthcare Limited, Kheda.

Real Time Stability Study Data

PRODUCT NAME	STERILISED WATER FOR INJECTIONS BP		
BATCH NO.	2T543064	BATCH SIZE	4400 Litre
MFG. DATE	MAY-2013	PACK SIZE	10 mL
EXP.DATE	APR-2017	CONDITIONS	25 ± 2°C / 60 ± 5% RH
TYPE OF PLASTIC USED	LDPE BB120	KEPT ON DATE	05/05/13

Page No. : 1 of 3

Test	Limit	Initial	3 Months	6 Months	9 Months	12 Months	18 Months	24 Months	36 Months	48 Months
Appearance	A clear and colorless solution	A clear and colorless solution	A clear and colorless solution	A clear and colorless solution	A clear and colorless solution	A clear and colorless solution	A clear and colorless solution	A clear and colorless solution	A clear and colorless solution	
Extractable Volume	Not less than nominal volume and not more than 110% of the nominal volume.	10.4 mL	10.1 mL	10.2 mL	10.2 mL	10.2 mL	10.2 mL	NA	NA	
Acidity or Alkalinity	If the solution is yellow, it becomes red on the addition of 0.1 mL of 0.01 M sodium hydroxide; if red, it becomes yellow on the addition of 0.15 mL of 0.01 M hydrochloric acid	The solution is Yellow,it becomes red on the addition of 0.1 ml of 0.01 M sodium hydroxide.	The solution is Yellow,it becomes red on the addition of 0.1 ml of 0.01 M sodium hydroxide.	The solution is Yellow,it becomes red on the addition of 0.1 ml of 0.01 M sodium hydroxide.	The solution is Yellow,it becomes red on the addition of 0.1 ml of 0.01 M sodium hydroxide.	The solution is Yellow,it becomes red on the addition of 0.1 ml of 0.01 M sodium hydroxide.	The solution is Yellow,it becomes red on the addition of 0.1 ml of 0.01 M sodium hydroxide.	The solution is Yellow,it becomes red on the addition of 0.1 ml of 0.01 M sodium hydroxide.	The solution is Yellow,it becomes red on the addition of 0.1 ml of 0.01 M sodium hydroxide.	
Conductivity	Maximum 25 µs.cm^{-1} for containers with a nominal volume of 10 mL or less at 25 °C ± 1 °C	1.151 µs.cm^{-1}	1.644 µs.cm^{-1}	2.578 µs.cm^{-1}	2.095 µs.cm^{-1}	2.125 µs.cm^{-1}	1.788 µs.cm^{-1}	2.640 µs.cm^{-1}	2.671 µs.cm^{-1}	
Oxidisable Substances	The.solution remains faintly pink	The solution remains faintly pink	The solution remains faintly pink	The solution remains faintly pink	The solution remains faintly pink	The solution remains faintly pink	The solution remains faintly pink	The solution remains faintly pink	The solution remains faintly pink	
Chlorides	Maximum 0.5 ppm	<0.5 ppm	<0.5 ppm	<0.5 ppm	<0.5 ppm	<0.5 ppm	<0.5 ppm	<0.5 ppm	<0.5 ppm	

Prepared By: [illegible]	Checked By: [illegible]	Reviewed By(RA): Sweety [illegible]	Reviewed By(QA): Abhishek Anand
Sign. [illegible]	Sign. [illegible]	Sign. [illegible]	Sign. [illegible]
Date 20/05/2016	Date 20/05/2016	Date 25/05/2016	Date 26/05/2016

Format No. :CB2015/F11-00

Amanta

Amanta Healthcare Limited, Kheda.

Real Time Stability Study Data

PRODUCT NAME	STERILISED WATER FOR INJECTIONS BP		
BATCH NO.	2T543064	BATCH SIZE	4400 Litre
MFG. DATE	MAY-2013	PACK SIZE	10 mL
EXP.DATE	APR-2017	CONDITIONS	25 ± 2°C / 60 ± 5% RH
TYPE OF PLASTIC USED	LDPE BB120	KEPT ON DATE	05/05/13

Page No. : 2 of 3

Test	Limit	Initial	3 Months	6 Months	9 Months	12 Months	18 Months	24 Months	36 Months	48 Months
Nitrates	Maximum 0.2 ppm	<0.2 ppm	<0.2 ppm	<0.2 ppm	<0.2 ppm	<0.2 ppm	<0.2 ppm	<0.2 ppm	<0.2 ppm	
Sulfates	The solution shows no change in appearance for at least 1 h.	The solution shows no change in appearance for at least 1 h	The solution shows no change in appearance for at least 1 h	The solution shows no change in appearance for at least 1 h	The solution shows no change in appearance for at least 1 h	The solution shows no change in appearance for at least 1 h	The solution shows no change in appearance for at least 1 h	The solution shows no change in appearance for at least 1 h	The solution shows no change in appearance for at least 1 h	
Ammonium	For containers with a nominal volume less than 50 mL: Maximum 0.6 ppm	<0.6 ppm	<0.6 ppm	<0.6 ppm	<0.6 ppm	<0.6 ppm	<0.6 ppm	<0.6 ppm	<0.6 ppm	
Calcium and Magnesium	A pure blue colour should be produced	A pure blue colour is produced	A pure blue colour is produced	A pure blue colour is produced	A pure blue colour is produced	A pure blue colour is produced	A pure blue colour is produced	A pure blue colour is produced	A pure blue colour is produced	
Residue on Evaporation	Maximum 4 mg (0.004 per cent) for containers with a nominal volume of 10 mL or less.	0.0005%	0.0002%	0.0003%	0.0006%	0.0009%	0.0005%	0.0003%	0.0009%	
Particulate contamination: Sub-visible particles	Average particles not more than 6000 per container equal to or greater than 10 µm and not more than 600 per container equal to or greater than 25 µm	23 03	NA	NA	NA	26 03	NA	324.00 46.00	71.33 29.33	

Prepared By: KAMLESH PATEL	Checked By: NIPUL Patel	Reviewed By(RA): Sweety Suchadia	Reviewed By(QA): Abhishek Anand
Sign.	Sign.	Sign.	Sign.
Date 20/05/2016	Date 20/5/2016	Date 25/05/2016	Date 26/05/2016

Format No. :CB2015/F11-00

Amanta

Amanta Healthcare Limited, Kheda.

Real Time Stability Study Data

PRODUCT NAME	**STERILISED WATER FOR INJECTIONS BP**		
BATCH NO.	**2T543064**	**BATCH SIZE**	**4400 Litre**
MFG. DATE	**MAY-2013**	**PACK SIZE**	**10 mL**
EXP.DATE	**APR-2017**	**CONDITIONS**	**25 ± 2°C / 60 ± 5% RH**
TYPE OF PLASTIC USED	**LDPE BB120**	**KEPT ON DATE**	**05/05/13**

Page No. : 3 of 3

Test	Limit	Initial	3 Months	6 Months	9 Months	12 Months	18 Months	24 Months	36 Months	48 Months
Sterility	Should be sterile	sterile	NA	NA	NA	sterile	NA	sterile	sterile	
Bacterial Endotoxins	Not more than 0.25 IU/mL	<0.25 IU/mL	NA	NA	NA	<0.25 IU/mL	NA	<0.25 IU/mL	<0.25 IU/mL	
Calcium	No turbidity should be produced	No turbidity is produced	No turbidity is produced	No turbidity is produced	No turbidity is produced	No turbidity is produced	No turbidity is produced	No turbidity is produced	No turbidity is produced	
Carbon Dioxide	The mixture remains clear	The mixture remains clear	The mixture remains clear	The mixture remains clear	The mixture remains clear	The mixture remains clear	The mixture remains clear	The mixture remains clear	The mixture remains clear	
pH	Between 5.0 and 7.0 at 25 °C ± 2 °C	5.89	6.25	5.88	5.33	5.28	5.30	5.34	5.17	
Heavy metals	Not more than 0.1 ppm	<0.1 ppm	<0.1 ppm	<0.1 ppm	<0.1 ppm	<0.1 ppm	<0.1 ppm	<0.1 ppm	<0.1 ppm	

Conclusion: Product is stable up to 36 months when charged at Real time condition

Remark: (1) NA = Not Applicable
(2) Extractable volume test is not preformed as Eliminated in the revised stability Test Record Date 16/01/2015

Remark: Re generated Real Time Stability Study Data

Prepared By: KANDARP PATEL	**Checked By:** Nirav Rajyaguru	**Reviewed By(RA):** Sweety Suthar	**Reviewed By(QA):** Abhishek Anand
Sign.	**Sign.**	**Sign.**	**Sign.**
Date 25/05/2016	**Date** 26/05/2016	**Date** 25/05/2016	**Date** 26/05/2016

Format No. :CB2015/F11-00

Amanta

Amanta Healthcare Limited, Kheda.
Real Time Stability Study Data

PRODUCT NAME	STERILISED WATER FOR INJECTIONS BP		
BATCH NO.	2T543065	BATCH SIZE	4400 Litre
MFG. DATE	MAY-2013	PACK SIZE	10 mL
EXP.DATE	APR-2017	CONDITIONS	25 ± 2°C / 60 ± 5% RH
TYPE OF PLASTIC USED	LDPE BB120	KEPT ON DATE	05/05/13

Page No. : 1 of 3

Test	Limit	Initial	3 Months	6 Months	9 Months	12 Months	18 Months	24 Months	36 Months	48 Months
Appearance	A clear and colorless solution	A clear and colorless solution	A clear and colorless solution	A clear and colorless solution	A clear and colorless solution	A clear and colorless solution	A clear and colorless solution	A clear and colorless solution	A clear and colorless solution	
Extractable Volume	Not less than nominal volume and not more than 110% of the nominal volume.	10.3 mL	10.2 mL	10.2 mL	10.0 mL	10.2 mL	10.2 mL	NA	NA	
Acidity or Alkalinity	If the solution is yellow, it becomes red on the addition of 0.1 mL of 0.01 M sodium hydroxide; if red, it becomes yellow on the addition of 0.15 mL of 0.01 M hydrochloric acid	The solution is Yellow,it becomes red on the addition of 0.1 ml of 0.01 M sodium hydroxide.	The solution is Yellow,it becomes red on the addition of 0.1 ml of 0.01 M sodium hydroxide.	The solution is Yellow,it becomes red on the addition of 0.1 ml of 0.01 M sodium hydroxide.	The solution is Yellow,it becomes red on the addition of 0.1 ml of 0.01 M sodium hydroxide.	The solution is Yellow,it becomes red on the addition of 0.1 ml of 0.01 M sodium hydroxide.	The solution is Yellow,it becomes red on the addition of 0.1 ml of 0.01 M sodium hydroxide.	The solution is Yellow,it becomes red on the addition of 0.1 ml of 0.01 M sodium hydroxide.	The solution is Yellow,it becomes red on the addition of 0.1 ml of 0.01 M sodium hydroxide.	
Conductivity	Maximum 25 $\mu s.cm^{-1}$ for containers with a nominal volume of 10 mL or less at 25 °C ± 1 °C	1.618 $\mu s.cm^{-1}$	1.756 $\mu s.cm^{-1}$	1.640 $\mu s.cm^{-1}$	2.078 $\mu s.cm^{-1}$	2.536 $\mu s.cm^{-1}$	1.973 $\mu s.cm^{-1}$	2.467 $\mu s.cm^{-1}$	2.482 $\mu s.cm^{-1}$	
Oxidisable Substances	The solution remains faintly pink	The solution remains faintly pink	The solution remains faintly pink	The solution remains faintly pink	The solution remains faintly pink	The solution remains faintly pink	The solution remains faintly pink	The solution remains faintly pink	The solution remains faintly pink	
Chlorides	Maximum 0.5 ppm	<0.5 ppm	<0.5 ppm	<0.5 ppm	<0.5 ppm	<0.5 ppm	<0.5 ppm	<0.5 ppm	<0.5 ppm	

Prepared By: KANDARP PATEL Sign. [signature] Date 20/05/2016	Checked By: Nirav Koradiya Sign. [signature] Date 20/05/2016	Reviewed By(RA): Sweety Sukhadia Sign. [signature] Date 25/05/2016	Reviewed By(QA): Abhishek Anand Sign. [signature] Date 26/05/2016

Format No. :CB2015/F11-00

Amanta

Amanta Healthcare Limited, Kheda.

Real Time Stability Study Data

PRODUCT NAME	**STERILISED WATER FOR INJECTIONS BP**		
BATCH NO.	**2T543065**	**BATCH SIZE**	**4400 Litre**
MFG. DATE	**MAY-2013**	**PACK SIZE**	**10 mL**
EXP.DATE	**APR-2017**	**CONDITIONS**	**25 ± 2°C / 60 ± 5% RH**
TYPE OF PLASTIC USED	**LDPE BB120**	**KEPT ON DATE**	**05/05/13**

Page No. : 2 of 3

Test	Limit	Initial	3 Months	6 Months	9 Months	12 Months	18 Months	24 Months	36 Months	48 Months
Nitrates	Maximum 0.2 ppm	<0.2 ppm	<0.2 ppm	<0.2 ppm	<0.2 ppm	<0.2 ppm	<0.2 ppm	<0.2 ppm	<0.2 ppm	
Sulfates	The solution shows no change in appearance for at least 1 hour.	The solution shows no change in appearance for at least 1hour.	The solution shows no change in appearance for at least 1 hour.	The solution shows no change in appearance for at least 1 hour.	The solution shows no change in appearance for at least 1 hour.	The solution shows no change in appearance for at least 1 hour.	The solution shows no change in appearance for at least 1 hour.	The solution shows no change in appearance for at least 1 hour.	The solution shows no change in appearance for at least 1 hour.	
Ammonium	For containers with a nominal volume less than 50 mL: Maximum 0.6 ppm	<0.6 ppm	<0.6 ppm	<0.6 ppm	<0.6 ppm	<0.6 ppm	<0.6 ppm	<0.6 ppm	<0.6 ppm	
Calcium and Magnesium	A pure blue colour should be produced	A pure blue colour is produced	A pure blue colour is produced	A pure blue colour is produced	A pure blue colour is produced	A pure blue colour is produced	A pure blue colour is produced	A pure blue colour is produced	A pure blue colour is produced	
Residue on Evaporation	Maximum 4 mg (0.004 per cent) for containers with a nominal volume of 10 mL or less	0.0003%	0.0003%	0.0006%	0.0012%	0.0008%	0.0005%	0.0006%	0.0004%	
Particulate contamination: Sub-visible particles	Average particles not more than 6000 per container equal to or greater than 10 µm and not more than 600 per container equal to or greater than 25 µm	59 12	NA	NA	NA	33 13	NA	375.33 36.67	44.67 7.33	
Sterility	Should be sterile	sterile	NA	NA	NA	Sterile	NA	sterile	sterile	

Prepared By: KANDARP PATEL **Sign.** **Date** 20/05/2016	**Checked By:** Nirav Ramanuj **Sign.** **Date** 20/05/2016	**Reviewed By(RA):** Sweety Sukhadia **Sign.** Sweety **Date** 25/05/2016	**Reviewed By(QA):** Abhishek Anand **Sign.** **Date** 26/05/2016

Format No. :CB2015/F11-00

Amanta

Amanta Healthcare Limited, Kheda.

Real Time Stability Study Data

PRODUCT NAME	STERILISED WATER FOR INJECTIONS BP		
BATCH NO.	2T543065	BATCH SIZE	4400 Litre
MFG. DATE	MAY-2013	PACK SIZE	10 mL
EXP.DATE	APR-2017	CONDITIONS	25 ± 2°C / 60 ± 5% RH
TYPE OF PLASTIC USED	LDPE BB120	KEPT ON DATE	05/05/13

Page No. : 3 of 3

Test	Limit	Initial	3 Months	6 Months	9 Months	12 Months	18 Months	24 Months	36 Months	48 Months
Bacterial Endotoxins	Not more than 0.25 IU/mL	<0.25 IU/mL	NA	NA	NA	<0.25 IU/mL	NA	<0.25 IU/mL	<0.25 IU/mL	
Calcium	No turbidity should be produced	No turbidity is produced	No turbidity is produced	No turbidity is produced	No turbidity is produced	No turbidity is produced	No turbidity is produced	No turbidity is produced	No turbidity is produced	
Carbon Dioxide	The mixture remains clear	The mixture remains clear	The mixture remains clear	The mixture remains clear	The mixture remains clear	The mixture remains clear	The mixture remains clear	The mixture remains clear	The mixture remains clear	
pH	Between 5.0 and 7.0 at 25 °C ± 2 °C	5.86	6.21	5.65	5.29	5.26	5.23	5.37	5.25	
Heavy metals	Not more than 0.1 ppm	<0.1 ppm	<0.1 ppm	<0.1 ppm	<0.1 ppm	<0.1 ppm	<0.1 ppm	<0.1 ppm	<0.1 ppm	

Conclusion: Product is stable up to 36 months when charged at Real time condition

Remark: (1) NA = Not Applicable
(2) Extractable volume test is not preformed as Eliminated in the revised stability Test Record Date 16/01/2015

Remark: Re generated Real Time Stability Study Data.

Prepared By: KANJIBHAI PATEL	Checked By: Nirav Parmar	Reviewed By(RA): Sweety Surkhedia	Reviewed By(QA): Abhishek Anand
Sign.	Sign.	Sign.	Sign.
Date 20/05/2016	Date 20/05/2016	Date 25/05/2016	Date 26/05/2016

Format No. :CB2015/F11-00

Amanta

Amanta Healthcare Limited, Kheda.

Real Time Stability Study Data

PRODUCT NAME	STERILISED WATER FOR INJECTIONS BP		
BATCH NO.	2T543066	BATCH SIZE	4400 Litre
MFG. DATE	MAY-2013	PACK SIZE	10 mL
EXP.DATE	APR-2017	CONDITIONS	25 ± 2°C / 60 ± 5% RH
TYPE OF PLASTIC USED	LDPE BB120	KEPT ON DATE	05/05/13

Page No. : 1 of 3

Test	Limit	Initial	3 Months	6 Months	9 Months	12 Months	18 Months	24 Months	36 Months	48 Months
Appearance	A clear and colorless solution	A clear and colorless solution	A clear and colorless solution	A clear and colorless solution	A clear and colorless solution	A clear and colorless solution	A clear and colorless solution	A clear and colorless solution	A clear and colorless solution	
Extractable Volume	Not less than nominal volume and not more than 110% of the nominal volume	10.2 mL	10.2 mL	10.2 mL	10.2 mL	10.4 mL	10.2 mL	NA	NA	
Acidity or Alkalinity	If the solution is yellow, it becomes red on the addition of 0.1 mL of 0.01 M sodium hydroxide; if red, it becomes yellow on the addition of 0.15 mL of 0.01 M hydrochloric acid	The solution is Yellow,it becomes red on the addition of 0.1 ml of 0.01 M sodium hydroxide.	The solution is Yellow,it becomes red on the addition of 0.1 ml of 0.01 M sodium hydroxide.	The solution is Yellow,it becomes red on the addition of 0.1 ml of 0.01 M sodium hydroxide.	The solution is Yellow,it becomes red on the addition of 0.1 ml of 0.01 M sodium hydroxide.	The solution is Yellow,it becomes red on the addition of 0.1 ml of 0.01 M sodium hydroxide.	The solution is Yellow,it becomes red on the addition of 0.1 ml of 0.01 M sodium hydroxide.	The solution is Yellow,it becomes red on the addition of 0.1 ml of 0.01 M sodium hydroxide.	The solution is Yellow,it becomes red on the addition of 0.1 ml of 0.01 M sodium hydroxide.	
Conductivity	Maximum 25 $\mu s.cm^{-1}$ for containers with a nominal volume of 10 mL or less at 25 °C ± 1 °C	1.657 $\mu s.cm^{-1}$	1.677 $\mu s.cm^{-1}$	2.040 $\mu s.cm^{-1}$	2.089 $\mu s.cm^{-1}$	1.970 $\mu s.cm^{-1}$	1.938 $\mu s.cm^{-1}$	2.650 $\mu s.cm^{-1}$	2.421 $\mu s.cm^{-1}$	
Oxidisable Substances	The solution remains faintly pink	The solution remains faintly pink	The solution remains faintly pink	The solution remains faintly pink	The solution remains faintly pink	The solution remains faintly pink	The solution remains faintly pink	The solution remains faintly pink	The solution remains faintly pink	
Chlorides	Maximum 0.5 ppm	<0.5 ppm	<0.5 ppm	<0.5 ppm	<0.5 ppm	<0.5 ppm	<0.5 ppm	<0.5 ppm	<0.5 ppm	

Prepared By: KAHDARP PATEL	**Checked By:** Nipul Rupareliya	**Reviewed By(RA):** Sweety Sukhadia	**Reviewed By(QA):** Abhishek Anand
Sign. [signature]	**Sign.** [signature]	**Sign.** [signature]	**Sign.** [signature]
Date 20/05/2016	**Date** 20/05/2016	**Date** 25/05/2016	**Date** 26/05/2016

Format No. :CB2015/F11-00

Amanta

Amanta Healthcare Limited, Kheda.

Real Time Stability Study Data

PRODUCT NAME	STERILISED WATER FOR INJECTIONS BP		
BATCH NO.	2T543066	BATCH SIZE	4400 Litre
MFG. DATE	MAY-2013	PACK SIZE	10 mL
EXP.DATE	APR-2017	CONDITIONS	25 ± 2°C / 60 ± 5% RH
TYPE OF PLASTIC USED	LDPE BB120	KEPT ON DATE	05/05/13

Page No. : 2 of 3

Test	Limit	Initial	3 Months	6 Months	9 Months	12 Months	18 Months	24 Months	36 Months	48 Months
Nitrates	Maximum 0.2 ppm	<0.2 ppm	<0.2 ppm	<0.2 ppm	<0.2 ppm	<0.2 ppm	<0.2 ppm	<0.2 ppm	<0.2 ppm	
Sulfates	The solution shows no change in appearance for at least 1 h.	The solution shows no change in appearance for at least 1 h.	The solution shows no change in appearance for at least 1 h	The solution shows no change in appearance for at least 1 h	The solution shows no change in appearance for at least 1 h	The solution shows no change in appearance for at least 1 h	The solution shows no change in appearance for at least 1 h	The solution shows no change in appearance for at least 1 h	The solution shows no change in appearance for at least 1 h	
Ammonium	For containers with a nominal volume less than 50 mL: Maximum 0.6 ppm	<0.6 ppm	<0.6 ppm	<0.6 ppm	<0.6 ppm	<0.6 ppm	<0.6 ppm	<0.6 ppm	<0.6 ppm	
Calcium and Magnesium	A pure blue colour should be produced	A pure blue colour is produced	A pure blue colour is produced	A pure blue colour is produced	A pure blue colour is produced	A pure blue colour is produced	A pure blue colour is produced	A pure blue colour is produced	A pure blue colour is produced	
Residue on Evaporation	Maximum 4 mg (0.004 per cent) for containers with a nominal volume of 10 mL or less.	0.0006%	0.0002%	0.0004%	0.0007%	0.0007%	0.0007%	0.0003%	0.0006%	
Particulate contamination: Sub-visible particles	Average particles not more than 6000 per container equal to or greater than 10 µm and not more than 600 per container equal to or greater than 25 µm	48 8	NA	NA	NA	49.00 17.00	NA	368.67 47.33	94.00 30.00	
Sterility	Should be sterile	sterile	NA	NA	NA	sterile	NA	sterile	sterile	

Prepared By: KAMDARP PATEL	Checked By: Nimil Rupayan	Reviewed By(RA): Sweety Sukhadia	Reviewed By(QA): Abhishek Anand
Sign.	Sign.	Sign. Sweety	Sign. AA
Date 20/05/16	Date 20/05/2016	Date 25/05/2016	Date 26/05/2016

Format No. :CB2015/F11-00

Amanta

Amanta Healthcare Limited, Kheda.

Real Time Stability Study Data

PRODUCT NAME	STERILISED WATER FOR INJECTIONS BP		
BATCH NO.	2T543066	BATCH SIZE	4400 Litre
MFG. DATE	MAY-2013	PACK SIZE	10 mL
EXP.DATE	APR-2017	CONDITIONS	25 ± 2°C / 60 ± 5% RH
TYPE OF PLASTIC USED	LDPE BB120	KEPT ON DATE	05/05/13

Page No. : 3 of 3

Test	Limit	Initial	3 Months	6 Months	9 Months	12 Months	18 Months	24 Months	36 Months	48 Months
Bacterial Endotoxins	Not more than 0.25 IU/mL	<0.25 IU/mL	NA	NA	NA	<0.25 IU/mL	NA	<0.25 IU/mL	<0.25 IU/mL	
Calcium	No turbidity should be produced	No turbidity is produced	No turbidity is produced	No turbidity is produced	No turbidity is produced	No turbidity is produced	No turbidity is produced	No turbidity is produced	No turbidity is produced	
Carbon Dioxide	The mixture remains clear	The mixture remains clear	The mixture remains clear	The mixture remains clear	The mixture remains clear	The mixture remains clear	The mixture remains clear	The mixture remains clear	The mixture remains clear	
pH	Between 5.0 and 7.0 at 25 °C ± 2 °C	6.09	5.75	6.01	5.27	5.23	5.30	5.37	5.24	
Heavy metals	Not more than 0.1 ppm	<0.1 ppm	<0.1 ppm	<0.1 ppm	<0.1 ppm	<0.1 ppm	<0.1 ppm	<0.1 ppm	<0.1 ppm	

Conclusion: Product is stable up to 36 months when charged at Real time condition

Remark: (1) NA = Not Applicable
(2) Extractable volume test is not preformed as Eliminated in the revised stability Test Record Date 16/01/2015

Remark: Re generated Real Time Stability Study Data

Prepared By: KANDARP PATEL	Checked By: Nirav Raveshia	Reviewed By(RA): Sweety Sukhwani	Reviewed By(QA): Abhishek Anand
Sign.	Sign.	Sign.	Sign.
Date 20/05/2016	Date 21/05/2016	Date 25/05/2016	Date 26/05/2016

Format No. :CB2015/F11-00

IV. DISCUSIÓN

De acuerdo a los resultados obtenidos en el Estudio de Estabilidad, tanto Acelerado como a Tiempo Real de los lotes 2T543064, 2T543065 y 2T543066, se puede verificar que los lotes estudiados no muestran deterioro físico o químico en el envase utilizado (Frasco ampolla de plástico de polietileno de baja densidad (LDPE BB120)) y los parámetros analizados se mantuvieron dentro de los límites especificados, durante 36 meses en el estudio a tiempo real y durante 6 meses en el estudio acelerado.

V. ESPECIFICACIÓN PARA LA VIDA ÚTIL

Basado en los datos adquiridos de los estudios de estabilidad a tiempo real y acelerado, se propone periodo de eficacia para el solvente Agua para inyectables, sellado, en su envase original (Frasco ampolla de plástico de polietileno de baja densidad (LDPE BB120)) de 36 meses a partir de su fecha de fabricación almacenado a una temperatura ambiente no mayor a 25°C.

ESTUDIO DE ESTABILIDAD DEL LIOFILIZADO RECONSTITUIDO

PROTOCOLO

I. PROTOCOLO

Se determinó la estabilidad de IMAROZ liofilizado para solución inyectable 40 mg fabricado por Ciron Drugs & Pharmaceutical PVT LTD, una vez que es reconstituido con el solvente agua para inyectables. A continuación los lotes a analizar:

Número de lote	Fecha de manufactura	Tamaño de lote
5RD17	05/2015	10.000 viales
5RD18	05/2015	10.000 viales
5RD19	05/2015	10.000 viales

1. Condiciones

El estudio se realizó disolviendo las muestras en agua para inyectables bajo las siguientes condiciones:

	Cuarto con T° controlada	Refrigeración
Temperatura	30 ± 2°C	5 ± 3°C
Humedad Relativa	65% ± 5 %	No Definida
Solvente	Agua para inyectables Estéril BP	Agua para inyectables Estéril BP
Volumen de llenado	10 mL	10 mL
Concentración de Omeprazol en solución	40 mg / 10 mL; 4 mg/mL	40 mg / 10 mL; 4 mg/mL

2. Tipo de envase

Cada combipack contiene:

I. Vial con liofilizado:
Omeprazol Sódico Equivalente a 40 mg de Omeprazol
Tipo de envase: vial de vidrio USP tipo I con tapón de goma bromobutilo y sello de aluminio tipo flip off.

II. Frasco ampolla con solvente:
Agua estéril para inyectables
Tipo de envase: Frasco ampolla de plástico polietileno de baja densidad (LDPE BB120).

3. Restricciones de almacenamiento

La solución reconstituida se debe almacenar en su envase original (vial de vidrio USP tipo I de 10 mL).

4. Fecha de realización del estudio de estabilidad

El estudio se realizó el 09 de Septiembre del 2015.

5. Especificaciones y criterios de aceptación

TEST	ESPECIFICACIONES	Criterios de aceptación
Descripción	Polvo compacto color blanco, que al reconstituir con 10 mL de agua estéril para inyección da una solución clara e incolora.	Polvo compacto color blanco, que al reconstituir con 10 mL de agua estéril para inyección da una solución clara e incolora.
pH **Solución reconstituida**	Entre 10,0-12,0.	Entre 10,0-12,0.
Valoración. Cada 10 mL de solución hay un equivalente a 40 mg de Omeprazol.	90,0-110,0% 36,0 mg – 44,0 mg / Vial	90,0-110,0% 36,0 mg – 44,0 mg / Vial
Esterilidad	Debe ser estéril	Debe ser estéril

6. Frecuencia de Muestreo

	Cuarto con T° controlada (30 ± 2°C / 65 ± 5 %HR)	**Refrigeración (5 ± 3°C)**
Descripción, pH y Valoración	0, 12, 24, 36, 48, 60 horas	0, 12, 24, 36, 48, 60 horas
Esterilidad	0, 1, 2, 3, 4, 6 horas	0, 1, 2, 3, 4, 6 horas

ESTUDIO DE ESTABILIDAD DEL LIOFILIZADO RECONSTITUIDO

TABLAS DE RESULTADOS

II. TABLAS DE RESULTADOS

1. Estabilidad a T° controlada:

a. Descripción, pH, Valoración

CIRON DRUGS & PHARMACEUTICAL PVT LTD

RECONSTITUTED STABILITY STUDY DATA

Product Name	:	Omeprazole For Injection			
Dosage Form	:	Reconstituted Powder for Injection with sterile water for injection	**Strength**	:	40 mg
B. No.	:	5RD17	**Humidity**	:	65 ± 5% RH
D/M	:	May 2015	**Temperature**	:	30°C ± 2°C
D/E	:	April 2017	**Pack Size**	:	10 ml USP type I flint tubular vial
Study started at	:	04.09.2015			

Test	Specification	Initial Results	RESULTS AFTER				
			12 h	24 h	36 h	48 h	60 h
		04.09.2015	05.09.2015	05.09.2015	06.09.2015	06.09.2015	07.09.2015
Description	White powder/ cake, after reconstitution with 10.0 ml of sterile water for injection gives clear colourless solution	Complies	Complies	Complies	Complies	Complies	Complies
pH	10.0 to 12.0	10.58	10.49	10.43	10.36	10.29	9.84
Assay	Not less than 90.0% and not more than 110.0 % of the stated amount of Omeprazole (36.0 mg/vial to 44.0 mg/vial)	104.04 %	103.43 %	103.32 %	100.80 %	99.27 %	82.54 %

Analyzed By 07/09/2015 **Checked By** 09/09/2015 **Approved By** 10/09/2015

CIRON DRUGS & PHARMACEUTICAL PVT LTD

RECONSTITUTED STABILITY STUDY DATA

Product Name	:	Omeprazole For Injection			
Dosage Form	:	Reconstituted Powder for Injection with sterile water for injection	**Strength**	:	40 mg
B. No.	:	5RD18	**Humidity**	:	65 ± 5% RH
D/M	:	May 2015	**Temperature**	:	30°C ± 2°C
D/E	:	April 2017	**Pack Size**	:	10 ml USP type I flint tubular vial
Study started at	:	04.09.2015			

Test	**Specification**	**Initial Results**	**RESULTS AFTER**				
			12 h	**24 h**	**36 h**	**48 h**	**60 h**
		04.09.2015	05.09.2015	05.09.2015	06.09.2015	06.09.2015	07.09.2015
Description	White powder/ cake, after reconstitution with 10.0 ml of sterile water for injection gives clear colourless solution	Complies	Complies	Complies	Complies	Complies	Complies
pH	10.0 to 12.0	10.62	10.51	10.43	10.33	10.26	9.87
Assay	Not less than 90.0% and not more than 110.0 % of the stated amount of Omeprazole 36.0.mg/vial to 44.0 mg/vial	104.83 %	103.65 %	103.61 %	101.94 %	100.09 %	81.81 %

Analyzed By Rachav 07/09/2015 **Checked By** 09/09/2015 **Approved By** 10/09/2015

CIRON DRUGS & PHARMACEUTICAL PVT LTD

RECONSTITUTED STABILITY STUDY DATA

Product Name	:	Omeprazole For Injection			
Dosage Form	:	Reconstituted Powder for Injection with sterile water for injection	**Strength**	:	40 mg
B. No.	:	5RD19	**Humidity**	:	65 ± 5% RH
D/M	:	May 2015	**Temperature**	:	30°C ≠ 2°C
D/E	:	April 2017	**Pack Size**	:	10 ml USP type I flint tubular vial
Study started at	:	04.09.2015			

Test	**Specification**	**Initial Results**	**RESULTS AFTER**				
			12 h	**24 h**	**36 h**	**48 h**	**60 h**
		04.09.2015	05.09.2015	05.09.2015	06.09.2015	06.09.2015	07.09.2015
Description	White powder/ cake, after reconstitution with 10.0 ml of sterile water for injection gives clear colourless solution	Complies	Complies	Complies	Complies	Complies	Complies
pH	10.0 to 12.0	10.61	10.53	10.45	10.31	10.18	9.77
Assay	Not less than 90.0% and not more than 110.0 % of the stated amount of Omeprazole 36.0 mg/vial to 44.0 mg/vial	104.91 %	103.83 %	103.60 %	100.33 %	96. 34 %	81.60 %

Analyzed By 07/09/2015 **Checked By** 09/09/2015 **Approved By** 10/09/2015

b. Esterilidad

CIRON DRUGS & PHARMACEUTICAL PVT LTD

RECONSTITUTION STABILITY STUDY DATA

Product Name	:	Omeprazole For Injection			
Dosage Form	:	Reconstitution Powder for Injection with sterile water for injection (WFI)	**Strength**	:	40 mg
D/M	:	May 2015	**Humidity**	:	65 ± 5% RH
D/E	:	April 2017	**Temperature**	:	30°C ± 2°C
Pack Size	:	10 ml USP type I flint tubular vial			

Test	Specification	Batch no	Tested date	Initial Results	RESULTS AFTER				
					1 hrs	2 hrs	3 hrs	4 hrs	6 hrs
Sterility test	Should be sterile	5RD17	19.09.2015	Sterile	Sterile	Sterile	Sterile	Sterile	Not Sterile
Sterility test	Should be sterile	5RD18	20.09.2015	Sterile	Sterile	Sterile	Sterile	Sterile	Not Sterile
Sterility test	Should be sterile	5RD19	21.09.2015	Sterile	Sterile	Sterile	Sterile	Sterile	Not Sterile

Analyzed By Kishor 18/10/2015

Checked By 18/10/2015

Approved By Chauhan 18/10/2015

2. Estabilidad en refrigeración

a. Descripción, pH, Valoración

CIRON DRUGS & PHARMACEUTICAL PVT LTD

RECONSTITUTED STABILITY STUDY DATA

Product Name	:	Omeprazole For Injection			
Dosage Form	:	Reconstituted Powder for Injection with sterile water for injection	**Strength**	:	40 mg
B. No.	:	5RD17	**Humidity**	:	---------
D/M	:	May 2015	**Temperature**	:	5°C ± 3°C
D/E	:	April 2017	**Pack Size**	:	10 ml USP type I flint tubular vial
Study started at	:	04.09.2015			

Test	Specification	Initial Results	RESULTS AFTER				
			12 h	24 h	36 h	48 h	60 h
		04.09.2015	05.09.2015	05.09.2015	06.09.2015	06.09.2015	07.09.2015
Description	White powder/ cake, after reconstitution with 10.0 ml of sterile water for injection gives clear colourless solution	Complies	Complies	Complies	Complies	Complies	Complies
pH	10.0 to 12.0	10.58	10.52	10.47	10.41	10.32	9.92
Assay	Not less than 90.0% and not more than 110.0 % of the stated amount of Omeprazole 36.0 mg/vial to 44.0 mg/vial	104.04 %	104.06 %	103.57 %	102.39 %	100.84 %	82.56 %

Analyzed By 07/09/2015 **Checked By** 09/09/2015 **Approved By** 10/09/2015

CIRON DRUGS & PHARMACEUTICAL PVT LTD

RECONSTITUTED STABILITY STUDY DATA

Product Name	:	Omeprazole For Injection			
Dosage Form	:	Reconstituted Powder for Injection with sterile water for injection	**Strength**	:	40 mg
B. No.	:	5RD18	**Humidity**	:	---------
D/M	:	May 2015	**Temperature**	:	5°C ± 3°C
D/E	:	April 2017	**Pack Size**	:	10 ml USP type I flint tubular vial
Study started at	:	04.09.2015			

Test	Specification	Initial Results	RESULTS AFTER				
			12 h	24 h	36 h	48 h	60 h
		04.09.2015	05.09.2015	05.09.2015	06.09.2015	06.09.2015	07.09.2015
Description	White powder/ cake, after reconstitution with 10.0 ml of sterile water for injection gives clear colourless solution	Complies	Complies	Complies	Complies	Complies	Complies
pH	10.0 to 12.0	10.62	10.57	10.53	10.45	10.31	9.96
Assay	Not less than 90.0% and not more than 110.0 % of the stated amount of Omeprazole 36.0 mg/vial to 44.0 mg/vial	104.83 %	103.80 %	103.82 %	102.51 %	100.84 %	82.05 %

Analyzed By 07/09/2015 **Checked By** 09/09/2015 **Approved By** 10/09/2015

CIRON DRUGS & PHARMACEUTICAL PVT LTD

RECONSTITUTED STABILITY STUDY DATA

Product Name	:	Omeprazole For Injection			
Dosage Form	:	Reconstituted Powder for Injection with sterile water for injection	**Strength**	:	40 mg
B. No.	:	5RD19	**Humidity**	:	---------
D/M	:	May 2015	**Temperature**	:	5°C ± 3°C
D/E	:	April 2017	**Pack Size**	:	10 ml USP type I flint tubular vial
Study started at	:	04.09.2015			

Test	Specification	Initial Results	RESULTS AFTER				
			12 h	24 h	36 h	48 h	60 h
		04.09.2015	05.09.2015	05.09.2015	06.09.2015	06.09.2015	07.09.2015
Description	White powder/ cake, after reconstitution with 10.0 ml of sterile water for injection gives clear colourless solution	Complies	Complies	Complies	Complies	Complies	Complies
pH	10.0 to 12.0	10.61	10.57	10.48	10.37	10.20	9.81
Assay	Not less than 90.0% and not more than 110.0 % of the stated amount of Omeprazole 36.0 mg/vial to 44.0 mg/vial	104. 91 %	103.87 %	103.76 %	100.33 %	97.72 %	82.01 %

Analyzed By 07/09/2015 **Checked By** 09/09/2015 **Approved By** 10/09/15

b. Esterilidad

CIRON DRUGS & PHARMACEUTICAL PVT LTD

RECONSTITUTION STABILITY STUDY DATA

Product Name	:	Omeprazole For Injection			
Dosage Form	:	Reconstitution Powder for Injection with sterile water for injection (WFI)	**Strength**	:	40 mg
D/M	:	May 2015	**Humidity**	:	NA
D/E	:	April 2017	**Temperature**	:	5°C ± 3°C
Pack Size	:	10 ml USP type I flint tubular vial			

Test	Specification	Batch no	Tested date	Initial Results	RESULTS AFTER				
					1 hrs	2 hrs	3 hrs	4 hrs	6 hrs
Sterility test	Should be sterile	5RD17	19.09.2015	Sterile	Sterile	Sterile	Sterile	Sterile	Not Sterile
Sterility test	Should be sterile	5RD18	20.09.2015	Sterile	Sterile	Sterile	Sterile	Sterile	Not Sterile
Sterility test	Should be sterile	5RD19	21.09.2015	Sterile	Sterile	Sterile	Sterile	Sterile	Not Sterile

Analyzed By Kishor 18/10/2015 **Checked By** 18/10/2015 **Approved By** Chauhan 18/10/2015

III. DISCUSIÓN

Se realizó un estudio de estabilidad en del producto IMAROZ liofilizado para solución inyectable 40 mg de los lotes 5RD17, 5RD18 y 5RD19, evaluándose el tiempo en que el producto es capaz de mantener características aceptables, luego de ser reconstituido con 10 mL de solvente agua para inyectables en su envase original (vial de vidrio USP tipo I de 10 mL con tapón de goma bromobutilo y sello de aluminio tipo flip off), tanto a temperatura ambiente 30 ± 2°C y 75±5% H.R., como en refrigeración, es decir, a temperatura entre 5 ± 3°C.

De acuerdo a los resultados obtenidos, los resultados analíticos, fisicoquímicos y microbiológicos de todos los lotes en solución reconstituida se consideraron satisfactorios dentro de un margen de hasta 4 horas para la solución tanto a temperatura ambiente como en refrigeración; luego de las cuales el producto pierdes sus características aceptadas.

IV. CONCLUSIÓN

Una vez reconstituido IMAROZ liofilizado para solución inyectable 40 mg en agua para inyectables en su envase original (vial de vidrio USP tipo I de 10 mL con tapón de goma bromobutilo y sello de aluminio tipo flip off), puede ser utilizado hasta 4 horas independiente de si se almacena a temperatura ambiente bajo 30°C o si se refrigera; transcurrido este tiempo la solución debe ser desechada por completo.

ESTUDIO DE ESTABILIDAD DEL LIOFILIZADO RECONSTITUIDO DILUIDO

PROTOCOLO

I. PROTOCOLO

Se determinará la compatibilidad físico-química de IMAROZ liofilizado para solución inyectable 40 mg fabricado por Ciron Drugs & Pharmaceutical PVT LTD, una vez que es reconstituido con el solvente agua para inyectables, y diluido con los solventes recomendados: Solución cloruro de sodio 0,9% y Solución de dextrosa 5%.

A continuación los lotes a analizar:

Número de lote	Fecha de manufactura	Tamaño de lote
5RD17	05/2015	10.000 viales
5RD18	05/2015	10.000 viales
5RD19	05/2015	10.000 viales

1. Condiciones

El estudio se realizó disolviendo las muestras, ya reconstituidas con agua para inyectables, en dos solventes diferentes bajo las siguientes condiciones ambientales:

SOLVENTE 1

	Cuarto con T° controlada	Refrigeración
Temperatura	30 ± 2°C	5 ± 3°C
Humedad Relativa	65% ± 5 %	No Definida
Solvente	Solución de Cloruro de Sodio 0,9%	Solución de Cloruro de Sodio 0,9%
Volumen de llenado	100 mL	100 mL

SOLVENTE 2

	Cuarto con T° controlada	Refrigeración
Temperatura	30 ± 2°C	5 ± 3°C
Humedad Relativa	65% ± 5 %	No Definida
Solvente	Solución de Dextrosa 5%	Solución de Dextrosa 5%
Volumen de llenado	100 mL	100 mL

NOTA: Las diluciones son preparadas inmediatamente después de reconstituir el producto.

2. Volumen de llenado

A continuación se presenta un esquema del contenido de cada muestra analizada en el estudio:

Solvente	Dosis de Omeprazol	Volumen total	Contenedor
Agua para inyectables (WFI)	40 mg	10 mL: 10mL WFI	Vial de vidrio USP tipo I con tapón de goma bromobutilo y sello de aluminio tipo flip off
Solución de Cloruro de Sodio 0,9% (S 0,9%)	40 mg	110 mL: 10 mL WFI + 100 mL S 0,9%	Contenedor plástico
Solución de Dextrosa 5% (G 5%)	40 mg	110 mL: 10 mL WFI + 100 mL G 5%	Contenedor plástico

3. Tipo de envase

Cada combipack contiene:

I. Vial con liofilizado:
Omeprazol Sódico Equivalente a 40 mg de Omeprazol
Tipo de envase: Vial de vidrio USP tipo I con tapón de goma bromobutilo y sello de aluminio tipo flip off.

II. Frasco ampolla con solvente:
Agua estéril para inyectables
Tipo de envase: Frasco ampolla de plástico polietileno de baja densidad (LDPE BB120).

4. Restricciones de almacenamiento

El liofilizado se encuentra reconstituido en su envase original: vial de vidrio USP tipo I de 10 mL. La dilución de las muestras se realiza por separado en un contenedor plástico.

5. Fecha de realización del estudio de estabilidad

El estudio se realizó el 09 de Septiembre del 2015.

6. Especificaciones y criterios de aceptación

TEST	ESPECIFICACIONES	Criterios de aceptación
Descripción	La solución debe ser clara e incolora.	La solución debe ser clara e incolora.
pH Solución reconstituida	Entre 10,0-12,0.	Entre 10,0-12,0.
Valoración.	90,0-110,0% 36,0 mg – 44,0 mg por vial	90,0-110,0%
Esterilidad	Debe ser estéril	Debe ser estéril

7. Frecuencia de Muestreo

	Cuarto con T° controlada (30 ± 2°C / 65 ± 5 %HR)	**Refrigeración (5 ± 3°C)**
Descripción, pH y Valoración	0, 12, 24, 36, 48, 60 horas	0, 12, 24, 36, 48, 60 horas
Esterilidad	0, 1, 2, 3, 4, 6 horas	0, 1, 2, 3, 4, 6 horas

ESTUDIO DE ESTABILIDAD DEL LIOFILIZADO RECONSTITUIDO DILUIDO

TABLAS DE RESULTADOS

II. TABLA DE RESULTADOS

1. Dilución en suero fisiológico: Estabilidad a T° controlada

a. Descripción, ph y Valoración

CIRON DRUGS & PHARMACEUTICAL PVT LTD

DILUTED STABILITY STUDY DATA

Product Name	:	Omeprazole For Injection			
Dosage Form	:	Diluted Powder for Injection with 0.9% Sodium Chloride Solution	**Strength**	:	40 mg
B. No.	:	5RD17	**Humidity**	:	65 ± 5% RH
D/M	:	May 2015	**Temperature**	:	30°C ± 2°C
D/E	:	April 2017	**Pack Size**	:	10 ml USP type I flint tubular vial
Study started at	:	04.09.2015			

Test	Specification	Initial Results	RESULTS AFTER				
			12 h	24 h	36 h	48 h	60 h
		04.09.2015	05.09.2015	05.09.2015	06.09.2015	06.09.2015	07.09.2015
Description	A clear, colourless Solution	Complies	Complies	Complies	Complies	Complies	Complies
pH	10.0 to 12.0	10.60	10.51	10.47	10.40	10.31	9.81
Assay	Not less than 90.0% and not more than 110.0 % of the stated amount of Omeprazole 36.0 mg/vial to 44.0 mg/vial	107.90 %	103.70 %	101.76 %	101.69 %	100.31 %	82.68 %

Analyzed By 07/09/2015 **Checked By** 09/09/2015 **Approved By** 10/09/2015

CIRON DRUGS & PHARMACEUTICAL PVT LTD

DILUTED STABILITY STUDY DATA

Product Name	:	Omeprazole For Injection			
Dosage Form	:	Diluted Powder for Injection with 0.9% Sodium Chloride Solution	**Strength**	:	40 mg
B. No.	:	5RD18	**Humidity**	:	65 ± 5% RH
D/M	:	May 2015	**Temperature**	:	30°C ± 2°C
D/E	:	April 2017	**Pack Size**	:	10 ml USP type I flint tubular vial
Study started at	:	04.09.2015			

Test	Specification	Initial Results	RESULTS AFTER				
			12 h	24 h	36 h	48 h	60 h
		04.09.2015	05.09.2015	05.09.2015	06.09.2015	06.09.2015	07.09.2015
Description	A clear, colourless Solution	Complies	Complies	Complies	Complies	Complies	Complies
pH	10.0 to 12.0	10.57	10.52	10.44	10.40	10.36	9.80
Assay	Not less than 90.0% and not more than 110.0 % of the stated amount of Omeprazole 36.0 mg/vial to 44.0 mg/ vial	107.36 %	104.75 %	103.55 %	101.68 %	99.46 %	82.63 %

Analyzed By 07/09/2015 **Checked By** 09/09/2015 **Approved By** 10/09/2015

CIRON DRUGS & PHARMACEUTICAL PVT LTD

DILUTED STABILITY STUDY DATA

Product Name	:	Omeprazole For Injection			
Dosage Form	:	Diluted Powder for Injection with 0.9% Sodium Chloride Solution	**Strength**	:	40 mg
B. No.	:	5RD19	**Humidity**	:	65 ± 5% RH
D/M	:	May 2015	**Temperature**	:	30°C ± 2°C
D/E	:	April 2017	**Pack Size**	:	10 ml USP type I flint tubular vial
Study started at	:	04.09.2015			

Test	**Specification**	**Initial Results**	**RESULTS AFTER**				
			12 h	**24 h**	**36 h**	**48 h**	**60 h**
		04.09.2015	05.09.2015	05.09.2015	06.09.2015	06.09.2015	07.09.2015
Description	A clear, colourless Solution	Complies	Complies	Complies	Complies	Complies	Complies
pH	10.0 to 12.0	10.64	10.56	10.41	10.33	10.27	9.79
Assay	Not less than 90.0% and not more than 110.0 % of the stated amount of Omeprazole 36.0 mg/vial to 44.0 mg/vial	106.07 %	103.97 %	101.49 %	101.32 %	100.62 %	83.24 %

Analyzed By 07/09/2015 **Checked By** 09/09/2015 **Approved By** 10/09/2015

b. Esterilidad

CIRON DRUGS & PHARMACEUTICAL PVT LTD

DILUTION STABILITY STUDY DATA

Product Name	:	Omeprazole For Injection			
Dosage Form	:	Dilution for Injection with0.9% Sodium Chloride Solution	**Strength**	:	40 mg
D/M	:	May 2015	**Humidity**	:	65 ± 5% RH
D/E	:	April 2017	**Temperature**	:	30°C ± 2°C
Pack Size	:	10 ml USP type I flint tubular vial			

Test	Specification	Batch no	Tested date	Initial Results	RESULTS AFTER				
					1 hrs	2 hrs	3 hrs	4 hrs	6 hrs
Sterility test	Should be sterile	5RD17	15.11.2015	Sterile	Sterile	Sterile	Sterile	Sterile	Not Sterile
Sterility test	Should be sterile	5RD18	15.11.2015	Sterile	Sterile	Sterile	Sterile	Sterile	Not Sterile
Sterility test	Should be sterile	5RD19	15.11.2015	Sterile	Sterile	Sterile	Sterile	Sterile	Not Sterile

Analyzed By Kishor 30/11/2015 **Checked By** 30/11/2015 **Approved By** Chauhan 30/11/2015

2. Dilución en suero fisiológico: Estabilidad en refrigeración

a. Descripción, ph y Valoración

CIRON DRUGS & PHARMACEUTICAL PVT LTD

DILUTED STABILITY STUDY DATA

Product Name	:	Omeprazole For Injection			
Dosage Form	:	Diluted Powder for Injection with 0.9% Sodium Chloride Solution	**Strength**	:	40 mg
B. No.	:	5RD17	**Humidity**	:	---------
D/M	:	May 2015	**Temperature**	:	5°C ± 3°C
D/E	:	April 2017	**Pack Size**	:	10 ml USP type I flint tubular vial
Study started at	:	04.09.2015			

Test	**Specification**	**Initial Results**	**RESULTS AFTER**				
			12 h	**24 h**	**36 h**	**48 h**	**60 h**
		04.09.2015	05.09.2015	05.09.2015	06.09.2015	06.09.2015	07.09.2015
Description	A clear, colourless Solution	Complies	Complies	Complies	Complies	Complies	Complies
pH	10.0 to 12.0	10.60	10.54	10.49	10.43	10.33	9.85
Assay	Not less than 90.0% and not more than 110.0 % of the stated amount of Omeprazole 36.0 mg/vial to 44.0 mg/vial	107.90 %	103.76 %	101.86%	101.76 %	100.41 %	83.13 %

Analyzed By 07/09/2015 **Checked By** 09/09/2015 **Approved By** 10/09/2015

CIRON DRUGS & PHARMACEUTICAL PVT LTD

DILUTED STABILITY STUDY DATA

Product Name	:	Omeprazole For Injection			
Dosage Form		Diluted Powder for Injection with 0.9% Sodium Chloride Solution	**Strength**	:	40 mg
B. No.	:	5RD18	**Humidity**	:	---------
D/M	:	May 2015	**Temperature**	:	5°C ± 3°C
D/E	:	April 2017	**Pack Size**	:	10 ml USP type I flint tubular vial
Study started at	:	04.09.2015			

Test	Specification	Initial Results	RESULTS AFTER				
			12 h	24 h	36 h	48 h	60 h
		04.09.2015	05.09.2015	05.09.2015	06.09.2015	06.09.2015	07.09.2015
Description	A clear, colourless Solution	Complies	Complies	Complies	Complies	Complies	Complies
pH	10.0 to 12.0	10.57	10.55	10.47	10.43	10.38	9.87
Assay	Not less than 90.0% and not more than 110.0 % of the stated amount of Omeprazole 36.0 mg/vial to 44.0 mg/vial	107.36 %	104.85%	103.60 %	101.94%	99.53 %	82.88 %

Analyzed By 07/09/2015 **Checked By** 09/09/2015 **Approved By** 10/09/2015

CIRON DRUGS & PHARMACEUTICAL PVT LTD

DILUTED STABILITY STUDY DATA

Product Name	:	Omeprazole For Injection			
Dosage Form	:	Diluted Powder for Injection with 0.9% Sodium Chloride Solution	**Strength**	:	40 mg
B. No.	:	5RD19	**Humidity**	:	---------
D/M	:	May 2015	**Temperature**	:	5°C ± 3°C
D/E	:	April 2017	**Pack Size**	:	10 ml USP type I flint tubular vial
Study started at	:	04.09.2015			

Test	**Specification**	**Initial Results**	**RESULTS AFTER**				
			12 h	**24 h**	**36 h**	**48 h**	**60 h**
		04.09.2015	05.09.2015	05.09.2015	06.09.2015	06.09.2015	07.09.2015
Description	A clear, colourless Solution	Complies	Complies	Complies	Complies	Complies	Complies
pH	10.0 to 12.0	10.64	10.58	10.41	10.36	10.31	9.82
Assay	Not less than 90.0% and not more than 110.0 % of the stated amount of Omeprazole 36.0 mg/vial to 44.0 mg/vial	106.07 %	104.63 %	102.55 %	101.80 %	101.14 %	83.49 %

Analyzed By 07/09/2015 **Checked By** 09/09/2015 **Approved By** 10/09/2015

b. Esterilidad

CIRON DRUGS & PHARMACEUTICAL PVT LTD

RECONSTITUTION STABILITY STUDY DATA

Product Name	:	Omeprazole For Injection			
Dosage Form	:	Dilution for Injection with0.9% Sodium Chloride Solution	**Strength**	:	40 mg
D/M	:	May 2015	**Humidity**	:	NA
D/E	:	April 2017	**Temperature**	:	5°C ± 3°C
Pack Size	:	10 ml USP type I flint tubular vial			

Test	Specification	Batch no	Tested date	Initial Results	RESULTS AFTER				
					1 hrs	2 hrs	3 hrs	4 hrs	6 hrs
Sterility test	Should be sterile	5RD17	15.11.2015	Sterile	Sterile	Sterile	Sterile	Sterile	Not Sterile
Sterility test	Should be sterile	5RD18	15.11.2015	Sterile	Sterile	Sterile	Sterile	Sterile	Not Sterile
Sterility test	Should be sterile	5RD19	15.11.2015	Sterile	Sterile	Sterile	Sterile	Sterile	Not Sterile

Analyzed By Kishor 30/11/2015

Checked By 30/11/2015

Approved By Chauhan 30/11/2015

3. Dilución en suero glucosado: Estabilidad a T° controlada

a. Descripción, ph y Valoración

CIRON DRUGS & PHARMACUTICAL PVT LTD

DILUTED STABILITY STUDY DATA

Product Name	:	Omeprazole For Injection			
Dosage Form	:	Diluted Powder for Injection with 5% Dextrose Solution	**Strength**	:	40 mg
B. No.	:	5RD17	**Humidity**	:	65 ± 5% RH
Mfg Date	:	May 2015	**Temperature**	:	30°C ± 2°C
Expiry Date	:	April 2017	**Pack Size**	:	10 ml USP type I flint tubular vial
Study started at	:	04.09.2015			

Test	**Specification**	**Initial Results**	**RESULTS AFTER**				
			12 h	**24 h**	**36 h**	**48 h**	**60 h**
		04.09.2015	05.09.2015	05.09.2015	06.09.2015	06.09.2015	07.09.2015
Description	A clear, colourless Solution	Complies	Complies	Complies	Complies	Complies	Complies
pH	10.0 to 12.0	10.48	10.27	10.21	10.09	9.91	9.71
Assay	Not less than 90.0% and not more than 110.0 % of the stated amount of Omeprazole 36.0 mg/vial to 44.0 mg/vial	101.56 %	98.38 %	97.20 %	92.01 %	89.45 %	74.17 %

Analyzed By 07/09/2015 **Checked By** 09/09/2015 **Approved By** 10/09/2015

CIRON DRUGS & PHARMACUTICAL PVT LTD

DILUTED STABILITY STUDY DATA

Product Name	:	Omeprazole For Injection			
Dosage Form	:	Diluted Powder for Injection with 5% Dextrose Solution	**Strength**	:	40 mg
B. No.	:	5RD18	**Humidity**	:	65 ± 5% RH
Mfg Date	:	May 2015	**Temperature**	:	30°C ± 2°C
Expiry Date	:	April 2017	**Pack Size**	:	10 ml USP type I flint tubular vial
Study started at	:	04.09.2015			

Test	Specification	Initial Results	RESULTS AFTER				
			12 h	24 h	36 h	48 h	60 h
		04.09.2015	05.09.2015	05.09.2015	06.09.2015	06.09.2015	07.09.2015
Description	A clear, colourless Solution	Complies	Complies	Complies	Complies	Complies	Complies
pH	10.0 to 12.0	10.42	10.30	10.21	10.11	9.95	9.70
Assay	Not less than 90.0% and not more than 110.0 % of the stated amount of Omeprazole 36.0 mg/vial to 44.0 mg/vial	101.45 %	98.74 %	95.76 %	92.04 %	89.36 %	73.71 %

Analyzed By 07/09/2015 **Checked By** 09/09/2015 **Approved By** 10/09/2015

CIRON DRUGS & PHARMACUTICAL PVT LTD

DILUTED STABILITY STUDY DATA

Product Name	:	Omeprazole For Injection			
Dosage Form	:	Diluted Powder for Injection with 5% Dextrose Solution	**Strength**	:	40 mg
B. No.	:	5RD19	**Humidity**	:	65 ± 5% RH
Mfg Date	:	May 2015	**Temperature**	:	30°C ± 2°C
Expiry Date	:	April 2017	**Pack Size**	:	10 ml USP type I flint tubular vial
Study started at	:	04.09.2015			

Test	Specification	Initial Results	RESULTS AFTER				
			12 h	24 h	36 h	48 h	60 h
		04.09.2015	05.09.2015	05.09.2015	06.09.2015	06.09.2015	07.09.2015
Description	A clear, colourless Solution	Complies	Complies	Complies	Complies	Complies	Complies
pH	10.0 to 12.0	10.45	10.31	10.20	10.10	9.92	9.67
Assay	Not less than 90.0% and not more than 110.0 % of the stated amount of Omeprazole 36.0 mg/vial to 44.0 mg/vial	101.46 %	98.21 %	95.94 %	92.27 %	89.32 %	64.87 %

Analyzed By 07/09/2015 **Checked By** 09/09/2015 **Approved By** 10/09/2015

b. Esterilidad

CIRON DRUGS & PHARMACEUTICAL PVT LTD

DILUTION STABILITY STUDY DATA

Product Name	:	Omeprazole For Injection			
Dosage Form	:	Dilution for Injection with 5% Dextrose Solution	**Strength**	:	40 mg
D/M	:	May 2015	**Humidity**	:	65 ± 5% RH
D/E	:	April 2017	**Temperature**	:	30°C ± 2°C
Pack Size	:	10 ml USP type I flint tubular vial			

Test	Specification	Batch no	Tested date	Initial Results	RESULTS AFTER				
					1 hrs	2 hrs	3 hrs	4 hrs	6 hrs
Sterility test	Should be sterile	5RD17	14.11.2015	Sterile	Sterile	Sterile	Sterile	Sterile	Not Sterile
Sterility test	Should be sterile	5RD18	14.11.2015	Sterile	Sterile	Sterile	Sterile	Sterile	Not Sterile
Sterility test	Should be sterile	5RD19	14.11.2015	Sterile	Sterile	Sterile	Sterile	Sterile	Not Sterile

Analyzed By Kishor 30/11/2015 **Checked By** 30/11/2015 **Approved By** 30/11/2015

4. Dilución en suero glucosado: Estabilidad en refrigeración

a. Descripción, ph y Valoración

CIRON DRUGS & PHARMACUTICAL PVT LTD

DILUTED STABILITY STUDY DATA

Product Name	:	Omeprazole For Injection			
Dosage Form	:	Diluted Powder for Injection with 5% Dextrose Solution	**Strength**	:	40 mg
B. No.	:	5RD17	**Humidity**	:	----------
Mfg Date	:	May 2015	**Temperature**	:	5°C ± 3°C
Expiry Date	:	April 2017	**Pack Size**	:	10 ml USP type I flint tubular vial
Study started at	:	04.09.2015			

Test	**Specification**	**Initial Results**	**RESULTS AFTER**				
			12 h	**24 h**	**36 h**	**48 h**	**60 h**
		04.09.2015	05.09.2015	05.09.2015	06.09.2015	06.09.2015	07.09.2015
Description	A clear, colourless Solution	Complies	Complies	Complies	Complies	Complies	Complies
pH	10.0 to 12.0	10.48	10.35	10.29	10.17	10.07	9.74
Assay	Not less than 90.0% and not more than 110.0 % of the stated amount of Omeprazole 36.0 mg/vial to 44.0 mg/vial	101.56 %	100.38 %	98.53 %	95.52 %	91.31 %	83.37 %

Analyzed By 07/09/2015 **Checked By** 09/09/2015 **Approved By** 10/09/2015

CIRON DRUGS & PHARMACUTICAL PVT LTD

DILUTED STABILITY STUDY DATA

Product Name	:	Omeprazole For Injection			
Dosage Form	:	Diluted Powder for Injection with 5% Dextrose Solution	**Strength**	:	40 mg
B. No.	:	5RD18	**Humidity**	:	----------
Mfg Date	:	May 2015	**Temperature**	:	5°C ± 3°C
Expiry Date	:	April 2017	**Pack Size**	:	10 ml USP type I flint tubular vial
Study started at	:	04.09.2015			

Test	Specification	Initial Results	RESULTS AFTER				
			12 h	24 h	36 h	48 h	60 h
		04.09.2015	05.09.2015	05.09.2015	06.09.2015	06.09.2015	07.09.2015
Description	A clear, colourless Solution	Complies	Complies	Complies	Complies	Complies	Complies
pH	10.0 to 12.0	10.42	10.39	10.31	10.22	10.14	9.77
Assay	Not less than 90.0% and not more than 110.0 % of the stated amount of Omeprazole 36.0 mg/vial to 44.0 mg/vial	101.45 %	101.06 %	99.15 %	96.62 %	93.09 %	82.65 %

Analyzed By 07/09/2015 **Checked By** 09/09/2015 **Approved By** 10/09/2015

CIRON DRUGS & PHARMACUTICAL PVT LTD

DILUTED STABILITY STUDY DATA

Product Name	:	Omeprazole For Injection			
Dosage Form	:	Diluted Powder for Injection with 5% Dextrose Solution	**Strength**	:	40 mg
B. No.	:	5RD19	**Humidity**	:	----------
Mfg Date	:	May 2015	**Temperature**	:	5°C ± 3°C
Expiry Date	:	April 2017	**Pack Size**	:	10 ml USP type I flint tubular vial
Study started at	:	04.09.2015			

Test	**Specification**	**Initial Results**	**RESULTS AFTER**				
			12 h	**24 h**	**36 h**	**48 h**	**60 h**
		04.09.2015	05.09.2015	05.09.2015	06.09.2015	06.09.2015	07.09.2015
Description	A clear, colourless Solution	Complies	Complies	Complies	Complies	Complies	Complies
pH	10.0 to 12.0	10.45	10.37	10.25	10.18	10.10	9.71
Assay	Not less than 90.0% and not more than 110.0 % of the stated amount of Omeprazole 36.0 mg/vial to 44.0 mg/vial	101.46 %	101.09 %	99.04 %	96.34 %	92.40 %	82.57 %

Analyzed By 07/09/2015 **Checked By** 09/09/2015 **Approved By** 10/09/2015

b. Esterilidad

CIRON DRUGS & PHARMACEUTICAL PVT LTD

RECONSTITUTION STABILITY STUDY DATA

Product Name	:	Omeprazole For Injection			
Dosage Form	:	Dilution for Injection with 5% Dextrose Solution	**Strength**	:	40 mg
D/M	:	May 2015	**Humidity**	:	NA
D/E	:	April 2017	**Temperature**	:	5°C ± 3°C
Pack Size	:	10 ml USP type I flint tubular vial			

Test	Specification	Batch no	Tested date	Initial Results	RESULTS AFTER				
					1 hrs	2 hrs	3 hrs	4 hrs	6 hrs
Sterility test	Should be sterile	5RD17	14.11.2015	Sterile	Sterile	Sterile	Sterile	Sterile	Not Sterile
Sterility test	Should be sterile	5RD18	14.11.2015	Sterile	Sterile	Sterile	Sterile	Sterile	Not Sterile
Sterility test	Should be sterile	5RD19	14.11.2015	Sterile	Sterile	Sterile	Sterile	Sterile	Not Sterile

Analyzed By Kishor 30/11/2015 **Checked By** 30/11/2015 **Approved By** Chauhan 30/11/2015

III. DISCUSIÓN

Se realizó un estudio de estabilidad del producto IMAROZ liofilizado para solución inyectable 40 mg de los lotes 5RD17, 5RD18 y 5RD19, evaluándose la compatibilidad fisicoquímica y microbiológica del producto al disolver la solución antes reconstituida, tanto en 100 mL de solución de cloruro de sodio 0,9%, como en 100 mL de solución de dextrosa 5%. Ambas diluciones en estudio se prepararon inmediatamente después de reconstituir el producto y su análisis se efectuó en un contenedor plástico, evaluándose su estabilidad tanto a temperatura ambiente entre 30 ± 2°C y 65±5% H.R., como en refrigeración, es decir, a temperatura entre 5 ± 3°C.

De acuerdo a los resultados obtenidos, se consideraron satisfactorios los parámetros fisicoquímicos y microbiológicos tanto de las muestras diluidas en cloruro de sodio 0,9%, como en solución de dextrosa 5%, dentro de un margen de hasta 4 horas para las diluciones tanto a temperatura ambiente como en refrigeración; tiempo luego del que el producto pierde sus características aceptadas.

IV. CONCLUSIÓN

El producto IMAROZ liofilizado para solución inyectable 40 mg con solvente es compatible tanto con solución de cloruro de sodio 0,9% como con solución de dextrosa 5%, por lo que puede ser diluida con ambos solventes de forma segura.

Las diluciones del producto preparadas inmediatamente después de ser reconstituido, pueden ser utilizadas hasta 4 horas después de su elaboración tanto si se almacena a temperatura ambiente (inferior a 30 °C) como en refrigeración; transcurrido este tiempo la solución debe ser desechada por completo.