

<b>Name Manufacturer</b>	<b>MEDITES PHARMA, spol. s r.o.</b>
<b>Department</b>	Quality Control
<b>Certificate</b>	Certificate of Analysis

We MEDITES PHARMA, spol. s r.o. hereby declare that:

### 1. Product identification



<b>Product name:</b>	CITRASOL 4%
<b>REF:</b>	601031
<b>Lot Number</b>	A0028920
<b>Manufacturing Date</b>	20200614
<b>Expiry Date</b>	2022 05
<b>Packaging type</b>	18 x 250 ml in a cardboard box
<b>Packaging material</b>	non – PVC bag; connectors: Tulip red cap, injection connector secondary packaging
<b>Unit volume</b>	250 ml

### 2. Finished product Analysis Compliance


Each production batch was sampled, tested and released to MEDITES PHARMA in accordance with specification NR - C115 CITRASOL.

<i>Parameter</i>	<i>Specification</i>	<i>Result</i>	<i>Reference</i>
<b><i>Physical and Chemical parameters</i></b>			
Identification of Active Compound	Identity test for presence of Sodium ( Na <sup>+</sup> ) and Citrates has to be satisfactory (passed).	Comply	FP20P3027
Clarity	The product must be clear.	Comply	FP20P3027
Actual acidity – pH	6.7 – 7.4.	Comply	FP20P3027
Aluminium	< 30 µg/L	Comply	FP20P3027
Available volume	The volume of the solution in the bag must not be lower than the volume printed on the PP bag.	Comply	FP20P3027
Assay of sodium	9.08 - 9.54 g/L	Comply	FP20P3027
Assay of citrates	24.3 - 26.8 g/L	Comply	FP20P3027
Contamination by particles under the visibility level	Particles of size ≥ 10 µm max. 25/ml. Particles of size ≥ 25 µm max. 3/ml.		P/225/20
<b><i>Microbiological parameters</i></b>			
Limit test for bacterial endotoxins	< 0.25 IU/ml	Comply	1368/20
Sterility	The product has to be sterile.	Comply	20/0359

### 3. QC Final Approval

Designated Authority	Name	Job title	Signature	Date
Prepared By	Alena Kulišťáková	QA / QC Specialist		9.4. 2020
Reviewed By	Radmila Doleželová	QA / QC manager		9.7. 2020

### 4. Final Release Approval

Designated Authority	Name	Job title	Signature	Date
Reviewed By	Radmila Doleželová	QA / QC manager		9.7. 2020



## Certificate of analysis

Work Order	: FP20P3027	Issue Date	: 23-JUN-2020
Client	: MEDITES PHARMA, spol. s r.o.	Laboratory	: ALS Czech Republic, s.r.o.
Contact	: Radmila Dolezelova	Contact	: F&P Client Service
Address	: 1. maje 2625 Roznov pod Radhostem Ceska republika 756 61	Address	: Na Harfe 336/9 Prague 9 - Vysocany Czech Republic 190 00
E-mail	: radmila_dolezelova@meditespharma. cz	E-mail	: czsupport.pharma@alsglobal.com
Telephone	: +420 5711 15905	Telephone	: +420 226 226 998
Facsimile	: ---	Facsimile	: +420 284 081 635
Project	: CITRASOL 4 250 ml	Page	: 1 of 3
Order number	: ---	Date of test	: 16-JUN-2020 - 23-JUN-2020
C-O-C number	: ---	Quote number	: PR2014MEDPH-CZ0473
Site	: Roznov pod Radhostem		
Sampled by	: client		

### General Comments

This report shall not be reproduced except in full, without prior written approval from the laboratory.  
The laboratory declares that the test results relate only to the listed samples.  
The information about sample representativity is not mentioned.  
The sample expiry date is not mentioned.  
Standardní operační postupy jednotlivých stanovení jsou popsány v CZ\_SOP\_D06\_04\_G170 - CZ\_SOP\_D06\_04\_G190

### Responsible person

Responsible for accuracy of reported results are persons listed below. The results were approved and authorized for reporting according to the procedures specified in the document CZ\_SOP\_D06\_GMP\_02 Processing of GMP Work Orders which is in accordance with the procedures specified in FDA document CFR Title 21, Part 11.

Name	Position	Authorization date
Eva Hudeckova	Pharmaceutical Section Supervisor	22-JUN-2020
Evzenie Glacnerova	Pharmaceutical Laboratory Manager	22-JUN-2020
Miroslava Juricova	Metals Section Coordinator	23-JUN-2020
Tomas Chovanec	Analyst	23-JUN-2020



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 Client : MEDITES PHARMA, spol. s r.o.



**Analytical Results**

**CITRASOL 4% CIT 4**

Sub-Matrix: PHARMACEUTICAL

Parameter	Method	Unit	Result	Low	High	Unit	Evaluation
Client sample ID Citrasol 4% 250 ml Lot:A0028920 Laboratory sample ID FP20P3027001 Client sampling date / time 16-JUN-2020 00:00 Citrasol 4% CIT 4							
<b>Assay</b>							
Citrates	P-ASSAY-CITR2	g/L	25.6	24.3	26.8	g/L	Pass
<b>Other</b>							
Actual acidity (pH)	P-PH-ELE	-	6.9	6.7	7.4	---	Pass
<b>Total Metals / Major Cations</b>							
Aluminium	P-METMSFX1	µg/L	12	---	30	µg/L	Pass
Sodium	P-METMSFX1	g/L	9.44	9.08	9.54	g/L	Pass

**Descriptive Results**

Sub-Matrix: PHARMACEUTICAL

Compound	Method	Result	Limit	Evaluation
Client sample ID Citrasol 4% 250 ml Lot:A0028920 Laboratory sample ID FP20P3027001 Client sampling date / time 16-JUN-2020 00:00				
<b>Identification of Active Compound</b>				
Citrates	P-IDEN-CITR	Pass	Pass	Pass
Client sample ID Citrasol 4% 250 ml Lot:A0028920 Laboratory sample ID FP20P3027001 Client sampling date / time 16-JUN-2020 00:00				
<b>Other</b>				
Available volume	P-AVOLUME	250 ml	min. 250 ml	Pass
Client sample ID Citrasol 4% 250 ml Lot:A0028920 Laboratory sample ID FP20P3027001 Client sampling date / time 16-JUN-2020 00:00				
<b>Sensory Parameters</b>				
Clarity	P-SENZ	The sample is clear.	The sample must be clear.	Pass
Client sample ID Citrasol 4% 250 ml Lot:A0028920 Laboratory sample ID FP20P3027001 Client sampling date / time 16-JUN-2020 00:00				
<b>Total Metals / Major Cations</b>				
Sodium	P-METAX-ID	passed	passed	pass

If the client does not specify the date and time of sample collection, the laboratory will specify the date on sample delivery in parentheses, instead. If the time of sample collection is specified as 0:00 it means that the client did specify the date but not the time.

**The end of result part of the certificate of analysis**

**Brief Method Summaries**

Analytical Methods	Method Descriptions
Location of test performance: Na Harfe 336/9 Prague 9 - Vysocany Czech Republic 190 00	

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<i>Analytical Methods</i>	<i>Method Descriptions</i>
P-METAX-ID	CZ_SOP_D06_04_001 (US EPA 200.7, ĚSN EN ISO 11885, ĚL/PhEur/USP, sample preparation as per CZ_SOP_D06_04_P01 (chap. 10.1, 10.3) Determination of elements by atomic emission spectrometry with inductively coupled plasma
P-METMSFX1	CZ_SOP_D06_04_002 (US EPA 200.8, ĚSN EN ISO 17294-2, ĚSN EN 15111, ĚL/PhEur/USP, samples prepared as per CZ_SOP_D06_04_P01 (chap. 10.1, 10.3) Determination of elements by mass spectrometry with inductively coupled plasma
<i>Location of test performance: Pødebradská 540/26 Praha 9 - Vysocany Czech Republic 190 00</i>	
P-ASSAY-CITR2	CZ_SOP_D06_04_G179 Assay Determination of Citric Acid / Citrate Determination (volumetric)
P-AVOLUME	Determination of available volume
P-IDEN-CITR	Identification tests
P-PH-ELE	CZ_SOP_D06_04_G183 Determination of current acidity (pH)
P-SENZ	CZ_SOP_D06_04_G182 Senzory Determination of Clarity and Degree of Coloration

**LAL TEST**  
**Limit test for bacterial endotoxins ( BET )**  
**in CITRASOL ...4%... ( Natrii citras .4%.)**

The test was carried out using work equipments and procedure in accordance with SOP:10.05.06.02 LAL test.

Controlled product: CITRASOL 4% ... 250 ml Lot No.: A0028920

Endotoxin limit: 0,25 EU/ml Analysis No.: 1368/20

LAL Reagent: Pyrotell (ACC) Declared sensitivity  $\lambda$  0,03 EU/ml

Lysate: --- Lot No.: 518-11-902

- dissolved in reconstitution buffer

Endotoxin: --- Lot No.: 168

Validation of the kit ( confirmation of sensitivity ) carried out on : 14.5.2020

**Preparation of the product:**

Dilution:

Quantity of undiluted product in ml: 1,0 Initial pH: 6,99

Quantity of buffer ( Tris ) in ml: 7,0

Quantity of water for BET in ml: ---

**Test result CITRASOL 4%:**


Determination	Sample	Positive control		Negative control
		1. 50 $\mu$ l 0,125 IU endotoxin/ml + 50 $\mu$ l water for BET	2. 50 $\mu$ l 0,125 IU endotoxin/ml + 50 $\mu$ l sample 1:3	
1.	-		+	-
2.	-		+	-

**Test result CITRASOL 0,5%:**

Determination	Sample	Positive control		Negative control
		1. 50 $\mu$ l 0,5 IU endotoxin/ml + 50 $\mu$ l water for BET	2. 50 $\mu$ l 0,5 IU endotoxin/ml + 50 $\mu$ l sample	
1.				
2.				

**Evaluation:**

The sample complies test for BET according to Ph.Eur. 9: yes  no

QC: 

Date of execution: 18.6.2020

QP: 

Date of control: 18.6.2020

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**Particle Sizing Systems, Inc.**  
**Santa Barbara, Calif., USA**

10.06.02.10/16.9.2019

**Particle Analysis Report**

CITRASOL 4 % 250 ml M0028920 P/225/20  
 File Name = A0028920.1CB Time Date = 12:56:51 6/18/2020  
 Sensor Model: LE400-0.5 EXT S/N: 9811901 Cal. File: 9811901E.sns  
 Date of Calibration: 06-11-19  
 Control File: C:\PSS\SWS788\sws788.rcp

Elapsed Time of Data Collection = 40 Sec.  
 Background File = NONE

Number of Pulls = 4 Volume of Pull = 5.0 ml

Large Volume Injectables

Cumulative Number of Particles Per Pull Volume

PULL	CH1 10.0	CH2 25.0 (um)
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1 *	3	0
2	2	0
3	1	0
4	0	0

MEAN #	1	0
#/ml	0	0
LIMIT	25	3
TEST	Passed	Passed

\* First pull was not included.

Operator's Name: kulistakova

Operator's Signature

Date

Supervisor's Approval

Date



IMUNA PHARM a.s.,  
Jarková 269/17  
082 22 Šarišské Michaľany

## Protokol o skúške / Protocol of analysis

Prípravok: Name of the product:	CITRASOL 4 %	Balenie/ Packaging	250 ml
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Číslo šarže / Batch No.:	A0028920	Č. protokolu OKK / QCD protocol No.:	20/0359
Zadávateľ / Customer:	MEDITES PHARMA	Č. protokolu zadávateľa / Customer protocol No.:	Zmluva o dielo z 27.3.2017 /
Skúšku vykonal / Analysed by:	BTL BMC SAV		The works contract from 27.3.2017

Skúška / Test	Akceptačné kritériá / Acceptance criteria	Výsledok / Result
Sterilita / Sterility (2.6.1.)	sterilný / sterile	sterilný / sterile
Záver: Výsledky skúšok VYHOVUJÚ NR-C-115 10.08.13 časť 1		
Conclusion: Results of tests COMPLY with NR-C-115 10.08.13 supplement 1		

Protokol o skúške vypracoval pracovník OKK /  
Protokol of Analysis issued by worker of QC:  
Dátum / Date: 1.7.2020

Mgr. K. Vargová  
Meno a podpis / Name and signature

Dátum / Date: 1.7.2020

Mgr. Daniel Žatko, PhD.  
Meno a podpis vedúceho OKK /  
Name and signature of the Head of QC Department

Ing. Michaela Mojová  
Zástupca vedúceho OKK