LAMPIRAN

Lampiran 1 Perhitungan Bahan Aktif Kurkumin

Diketahui:

Dosis kurkumin pada tikus = 3,0 mg/kgBB[141]

Bobot normal tikus = 0,2 kg

Faktor konversi tikus ke manusia = 56

Bobot normal manusia = 70 kg

Bobot rata-rata usia dewasa = 60 kg

Bobot *gummy candy* = 3750 mg

1) Perhitungan konversi dosis tikus ke manusia

   Dosis manusia = dosis tikus × bobot tikus × faktor konversi

   Dosis manusia = 3,0 mg × 0,2 × 56 = 33,6 mg/70 kg manusia

2) Perhitungan dosis satu hari

   Dosis dewasa = $\frac{\text{bobot usia dewasa}}{\text{bobot normal manusia} \times \text{dosis}}$

   Dosis dewasa = $\frac{60\ \text{kg}}{70\ \text{kg} \times 33{,}6\ \text{mg}} = 28{,}8\ \text{mg}$/60 kg manusia

3) Perhitungan dosis dalam 1 kali pemakaian (4 kali pemakaian)

   Konsentrasi = $\frac{28{,}8\ \text{mg}}{4} = 7{,}2\ \text{mg}$/60 kg manusia

4) Perhitungan konversi kurkumin menjadi kurkumin liposomal hidrat

   Kurkumin liposomal hidrat = 50 mg/10 mL

   Dosis kurkumin liposomal hidrat = $\frac{7{,}2\ \text{mg}}{50\ \text{mg}} \times 10\ \text{mL} = 1{,}44\ \text{mL}$

5) Perhitungan persen bahan aktif

   Konsentrasi = $\frac{1{,}44\ \text{mL}}{3{,}75\ \text{g}} \times 100\% = 38{,}4\%$ (v/b)

Lampiran 2 Perhitungan Rasio Formulasi Kurkumin Liposomal

Diketahui:

Mr kurkumin = 368,4 g/mol

Mr lecithin = 758,1g/mol

Bobot 1 kali pembuatan kurkumin liposomal = 50 mg

Volume etanol 96% = 7mL

1) Perhitungan molaritas kurkumin

Molaritas $= \frac{\text{gram}}{\text{Mr}} \times \frac{1000}{\text{volume}}$

Molaritas $= \frac{0{,}05\ \text{gr}}{368{,}4\ \text{g/mol}} \times \frac{1000}{7\ \text{mL}} = 0{,}01939\ \text{M}$

2) Perhitungan bobot lecithin (1:1)

Molaritas $= \frac{\text{gram}}{\text{Mr}} \times \frac{1000}{\text{volume}}$

0,01939 M $= \frac{\text{gram}}{758{,}1\ \text{g/mol}} \times \frac{1000}{7\ \text{mL}}$

gram $= \frac{0{,}01939\ \text{M} \times 758{,}1 \frac{\text{g}}{\text{mol}} \times 7\ \text{mL}}{1000} = 0{,}1029\ \text{gram}$

3) Perhitungan bobot lecithin (2:1)

0,01939 × 2 = 0,03878 M

Molaritas $= \frac{\text{gram}}{\text{Mr}} \times \frac{1000}{\text{volume}}$

0, 03878 M $= \frac{\text{gram}}{758{,}1\ \text{g/mol}} \times \frac{1000}{7\ \text{mL}}$

gram $= \frac{0{,}03878\ \text{M} \times 758{,}1 \frac{\text{g}}{\text{mol}} \times 7\ \text{mL}}{1000} = 0{,}2058\ \text{gram}$

4) Perhitungan bobot lecithin (3:1)

0,01939 × 3 = 0,05817

Molaritas $= \frac{\text{gram}}{\text{Mr}} \times \frac{1000}{\text{volume}}$

0, 05817 M $= \frac{\text{gram}}{758{,}1\ \text{g/mol}} \times \frac{1000}{7\ \text{mL}}$

gram $= \frac{0{,}05817\ \text{M} \times 758{,}1 \frac{\text{g}}{\text{mol}} \times 7\ \text{mL}}{1000} = 0{,}3087\ \text{gram}$

Lampiran 3 Perhitungan Larutan Standar Baku Kurkumin

Pembuatan larutan induk

Bahan	Jumlah
Kurkumin	10 mg
Volume labu ukur	100 mL
Konsentrasi	100 ppm

Pembuatan larutan baku kurkumin

V1 x ppm1 = V2 x ppm2

10 mL x 100 ppm = 50 mL x ppm2

ppm2 = $\frac{100 \text{ ppm x } 10 \text{ mL}}{50 \text{ mL}}$ = 20 ppm

Pembuatan larutan uji kurkumin

Larutan uji dibuat dengan memipet sejumlah baku kurkumin 20 ppm dan diencerkan dalam labu ukur 10 mL.

a. 0,5 ppm

V1 x ppm1 = V2 x ppm2

V1 x 20 ppm = 10 mL x 0,5 ppm

V1 = 0,25 mL

b. 3 ppm

V1 x ppm1 = V2 x ppm2

V1 x 20 ppm = 10 mL x 3 ppm

V1 = 1,5 mL

c. 4 ppm

V1 x ppm1 = V2 x ppm2

V1 x 20 ppm = 10 mL x 4 ppm

V1 = 2 mL

d. 5 ppm

V1 x ppm1 = V2 x ppm2

V1 x 20 ppm = 10 mL x 5 ppm

V1 = 2,5 mL

e. 6 ppm

V1 x ppm1 = V2 x ppm2

V1 x 20 ppm = 10 mL x 6 ppm

V1 = 3 mL

Lampiran 4 Hasil Data Kurva Kalibrasi Kurkumin

Kadar (ppm)	Abs			Rata-rata
	Replikasi 1	Replikasi 2	Replikasi 3	
0,5	0,143	0,144	0,143	0,143 ± 0,000
3	0,380	0,380	0,381	0,380 ± 0,000
4	0,475	0,475	0,476	0,475 ± 0,000
5	0,566	0,567	0,567	0,567 ± 0,000
6	0,659	0,658	0,658	0,658 ± 0,000

a = 0,0979

b = 0,0937

R^2 = 0,9999

Lampiran 5 Hasil Data Efisiensi Penjerapan

Formula	R1	R2	R3	Rata2 Abs	Konsentrasi Regresi Linier (%)	%EE
F1	0,469	0,470	0,469	0,469	3,96	99,62
F2	0,399	0,399	0,398	0,399	3,21	99,64
F3	0,279	0,279	0,279	0,279	1,93	99,96

a = 0,0979

b = 0,0937

- Perhitungan Konsentrasi Regresi Linier

a. F1

$$\text{Konsentrasi} = \frac{Rata\ Abs - b}{a}$$

$$\text{Konsentrasi} = \frac{0{,}469 - 0{,}0979}{0{,}0937} = 3{,}96\ ppm$$

b. F2

$$\text{Konsentrasi} = \frac{Rata\ Abs - b}{a}$$

$$\text{Konsentrasi} = \frac{0{,}399 - 0{,}0979}{0{,}0937} = 3{,}21\ ppm$$

c. F3

$$\text{Konsentrasi} = \frac{Rata\ Abs - b}{a}$$

$$\text{Konsentrasi} = \frac{0{,}279 - 0{,}0979}{0{,}0937} = 1{,}93\ ppm$$

- Perhitungan Konsentrasi Teoritis

Diketahui kurkumin liposomal hidrat

$$\frac{50\ mg}{0{,}01\ L} = 5000\ ppm$$

- Perhitungan % Efisiensi Penjerapan

a. F1

$$\%\text{EE} = \frac{Kadar\ zat\ teoritis - Kadar\ zat\ regresi\ linier}{Kadar\ zat\ teoritis} \times 100\%$$

$$\%\text{EE} = \frac{5000 - 3{,}96}{5000} \times 100\% = 99{,}62\%$$

b. F2

$$\%\text{EE} = \frac{Kadar\ zat\ teoritis - Kadar\ zat\ regresi\ linier}{Kadar\ zat\ teoritis} \times 100\%$$

$$\%\text{EE} = \frac{5000 - 3{,}21}{5000} \times 100\% = 99{,}64\%$$

c. F3

$$\%\text{EE} = \frac{Kadar\ zat\ teoritis - Kadar\ zat\ regresi\ linier}{Kadar\ zat\ teoritis} \times 100\%$$

$$\%\text{EE} = \frac{5000 - 1{,}93}{5000} \times 100\% = 99{,}96\%$$

Lampiran 6 Hasil Uji pH Kurkumin Liposomal

Replikasi	Nilai pH
1	5,56
2	5,56
3	5,76
Rata-rata	5,63 ± 0,0943

Lampiran 7 Perhitungan Bobot Jenis Kurkumin Liposomal

Bobot Piknometer Kosong (W1) (g)	Bobot Piknometer + Air (W2) (g)	Bobot Piknometer + Sampel (W2) (g)
17,929	27,412	27,453

Rumus : $\frac{w3 - w1}{w2 - w1}$

Bobot Jenis = $\frac{27{,}453\ g - 17{,}929\ g}{27{,}412\ g - 17{,}929\ g} = 1{,}0043\ g/mL$

Lampiran 8 Data Hasil Pengujian Viskositas Kurkumin Liposomal

Rumus : $\frac{n1}{n2} = \frac{\rho 1 \; x \; t1}{\rho 2 \; x \; t2}$

a. Replikasi 1

$$\frac{n1}{0{,}8007} = \frac{1{,}0043 \frac{g}{mL} x \; 02{,}53}{1 \frac{g}{mL} \; x \; 02{,}98} = 0{,}6827 \; cPs$$

b. Replikasi 2

$$\frac{n1}{0{,}8007} = \frac{1{,}0043 \frac{g}{mL} x \; 02{,}56}{1 \frac{g}{mL} \; x \; 02{,}94} = 0{,}7002 \; cPs$$

c. Replikasi 3

$$\frac{n1}{0{,}8007} = \frac{1{,}0043 \frac{g}{mL} x \; 02{,}69}{1 \frac{g}{mL} \; x \; 03{,}01} = 0{,}7187 \; cPs$$

Rata-rata = 0,70 ± 0,01

Lampiran 9 Hasil Pengujian Ukuran Partikel dan Indeks Polidispersitas

2026.06.03 14:40:07

HORIBA Scientific

HORIBA SZ-100 for Windows [Z Type] Ver2.20

SZ-100

F1_8032.nsz

Measurement Results

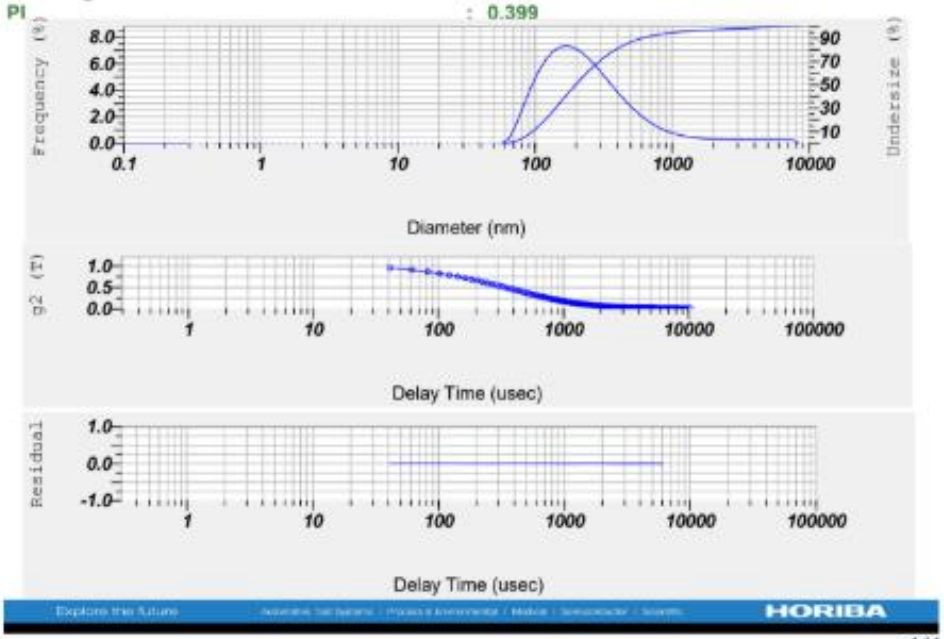
Date	:	21 May 2026 13:16:08
Measurement Type	:	Particle Size
Sample Name	:	F1
Scattering Angle	:	90
Temperature of the Holder	:	25.0 deg. C
Dispersion Medium Viscosity	:	0.896 mPa.s
Transmission Intensity before Meas.	:	32402
Distribution Form	:	|Standard|
Distribution Form(Dispersity)	:	Polydisperse
Representation of Result	:	Scattering Light Intensity
Count Rate	:	57 kCPS

Calculation Results

Peak No.	S.P.Area Ratio	Mean	S. D.	Mode
1	1.00	387.0 nm	750.6 nm	161.0 nm
2	---	--- nm	--- nm	--- nm
3	---	--- nm	--- nm	--- nm
Total	1.00	387.0 nm	750.6 nm	161.0 nm

Cumulant Operations

Z-Average	:	232.3 nm
PI	:	0.399



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1/1

Lampiran 10 Hasil Uji Keseragaman Bobot *Gummy candy*

Gummy candy	Bobot (g)				
	F1	F2	F3	F4	F5
1	3,580	3,634	3,889	3,435	3,140
2	3,575	3,733	3,881	3,368	2,903
3	3,608	3,644	3,746	2,981	3,097
4	3,571	3,687	3,726	3,118	3,377
5	3,563	3,699	3,737	3,294	2,920
6	3,731	3,759	3,769	3,211	3,464
7	3,612	3,667	3,708	2,897	3,230
8	3,725	3,703	3,782	3,104	3,307
9	3,628	3,744	3,652	3,390	3,318
10	3,652	3,623	3,718	3,235	3,448
11	3,618	3,682	3,600	2,862	3,501
12	3,586	3,737	3,705	3,448	2,862
13	3,630	3,622	3,733	3,307	3,502
14	3,605	3,679	3,715	3,464	2,970
15	3,642	3,695	3,879	3,377	3,212
16	3,613	3,660	3,743	3,304	3,271
17	3,716	3,608	3,602	3,398	3,267
18	3,635	3,740	3,706	3,132	3,580
19	3,580	3,746	3,708	3,394	3,338
20	3,731	3,737	3,681	3,112	3,452
Rata-rata	3,630 ± 54.905	3,690 ± 47.333	3,734 ± 79.138	3,242 ± 183.412	3,258 ± 216.190

Lampiran 11 *Moisture Content Gummy candy*

Formula	Replikasi	W0 (g)	W1 (g)	W2 (g)	%Kadar Air	Rata-rata %Kadar Air
F1	1	17,6095	18,1235	18,0829	7.90	7,2891 ± 0,4688
	2	18,0309	18,6020	18,5634	6.76	
	3	17,8820	18,4077	18,3698	7.21	
F2	1	17,6089	18,1938	18,1605	5.69	6,5795 ± 0,6325
	2	17,8003	18,0663	18,0479	6.92	
	3	17,7335	18,3073	18,2662	7.16	
F3	1	17,0543	17,4283	17,4055	6.10	5,9101 ± 0,1527
	2	17,6703	18,0678	18,0443	5.91	
	3	17,6023	17,9990	17,9763	5.72	
F4	1	17,6149	18,0524	17,9860	15.18	8,4771 ± 4,7377
	2	17,3721	17,7634	17,7432	5.16	
	3	17,4344	17,8645	17,8426	5.09	
F5	1	17,8000	18,1418	18,1295	3.60	3,0972 ± 0,7022
	2	17,1743	17,7731	17,7605	2.10	
	3	17,6117	17,9600	17,9475	3.59	

Lampiran 12 Hasil Uji pH *Gummy candy*

Formula	Replikasi	Nilai pH	Rata-rata pH
F1	1	5,06	5,06 ± 0,00
	2	5,06	
	3	5,06	
F2	1	5,81	5,81 ± 0,00
	2	5,81	
	3	5,81	
F3	1	5,21	5,21 ± 0,00
	2	5,21	
	3	5,21	
F4	1	6,11	6,11± 0,00
	2	6,11	
	3	6,11	
F5	1	4,91	4,91 ± 0,00
	2	4,91	
	3	4,91	

Lampiran 13 Proses Evaluasi *Gummy candy*



Lampiran 14 Data Hasil Uji Hedonik

Panelis	Parameter	Formula		
		F1	F2	F3
P1	Bentuk	5	5	5
	Rasa	5	4	5
	Bau	3	2	4
	Tekstur	4	3	5
P2	Bentuk	5	5	5
	Rasa	5	4	4
	Bau	5	4	4
	Tekstur	5	5	5
P3	Bentuk	4	4	4
	Rasa	3	1	2
	Bau	3	1	1
	Tekstur	2	2	2
P4	Bentuk	5	5	5
	Rasa	4	2	2
	Bau	3	4	5
	Tekstur	5	5	5
P5	Bentuk	5	5	5
	Rasa	5	3	2
	Bau	2	3	4
	Tekstur	4	3	4
P6	Bentuk	4	2	3
	Rasa	4	3	2
	Bau	3	3	4
	Tekstur	4	4	3
P7	Bentuk	4	4	4
	Rasa	4	3	4
	Bau	2	3	4
	Tekstur	4	4	3
P8	Bentuk	5	5	5
	Rasa	4	3	4
	Bau	3	3	3
	Tekstur	4	3	4
P9	Bentuk	5	5	4
	Rasa	3	4	3
	Bau	4	4	4
	Tekstur	4	4	3
P10	Bentuk	5	5	5
	Rasa	5	3	4
	Bau	3	3	3
	Tekstur	5	4	3
Jumlah Skor		161	142	150

Lampiran 15 Hasil Uji Stabilitas Penyimpanan (Keseragaman Bobot)

Gummy candy	Bobot (g)					
	T0	T3	T7	T14	T21	T30
1	3,857	3,660	3,671	3,696	3,786	3,928
2	3,734	3,751	3,716	3,877	3,871	3,602
3	3,671	3,848	3,608	3,644	3,936	3,743
4	3,807	3,673	3,700	3,652	3,590	3,752
5	3,595	3,863	3,763	3,764	3,565	3,658
6	3,728	3,626	3,570	3,693	3,570	3,651
7	3,696	3,574	3,561	3,637	3,602	3,879
8	3,781	3,857	3,699	3,619	3,934	3,589
9	3,644	3,842	3,605	3,871	3,866	3,751
10	3,716	3,652	3,697	3,646	3,777	3,683
11	3,734	3,874	3,666	3,687	3,580	3,781
12	3,680	3,602	3,566	3,631	3,646	3,670
13	3,886	3,602	3,907	3,757	3,570	3,749
14	3,883	3,599	3,586	3,644	3,749	3,873
15	3,730	3,871	3,688	3,634	3,776	3,584
16	3,687	3,839	3,680	3,742	3,819	3,681
17	3,795	3,634	3,749	3,681	3,912	3,923
18	3,773	3,623	3,593	3,753	3,563	3,770
19	3,714	3,852	3,568	3,638	3,642	3,813
20	3,804	3,743	3,623	3,628	3,714	3,757
Rata-rata	3,746 ± 75.527	3,729 ± 111,410	3,661 ± 83,892	3,695 ± 75,063	3,723 ± 132,340	3,742 ± 101,682

Lampiran 16 Hasil Uji Stabilitas Penyimpanan *(Moisture Content)*

Formula	Replikasi	W0 (g)	W1 (g)	W2 (g)	%Kadar Air	Rata-rata %Kadar Air
T0	1	17,4474	17,7693	17,7540	4,57	4,98 ± 0,17
	2	18,3329	18,6718	18,6547	5,05	
	3	17,9350	18,2822	18,2643	5,16	
T3	1	17,4654	17,8087	17,7927	4,66	5,92 ± 0,89
	2	17,6141	18,0149	17,9885	6,59	
	3	14,5627	14,9295	14,9056	6,52	
T7	1	17,7156	17,9982	17,9844	4,88	6,38 ± 1,90
	2	17,7578	18,0337	18,0194	5,18	
	3	16,7256	17,0943	17,0609	9,06	
T14	1	17,2086	17,5662	17,5317	9,65	9,33 ± 0,34
	2	17,5501	17,8931	17,8627	8,86	
	3	17,5431	17,8997	17,8659	9,48	
T21	1	17,6113	17,9469	17,9292	5,27	5,33 ± 0,09
	2	17,7617	18,0921	18,0747	5,27	
	3	18,2193	18,5416	18,5240	5,46	
T30	1	17,6607	18,0363	17,9938	11,32	12,96 ± 1,49
	2	18,1143	18,4987	18,4501	12,64	
	3	16,9739	17,3667	17,3081	14,92	

Lampiran 17 Hasil Uji Stabilitas Penyimpanan (pH)

Formula	Replikasi	Nilai pH	Rata-rata pH
T0	1	5,60	5,48 ± 0,08
	2	5,42	
	3	5,42	
T3	1	5,24	5,24 ± 0,00
	2	5,24	
	3	5,24	
T7	1	5,30	5,21 ± 0,06
	2	5,17	
	3	5,17	
T14	1	4,96	5,03 ± 0,05
	2	5,06	
	3	5,06	
T21	1	4,88	4,92 ± 0,05
	2	4,99	
	3	4,88	
T30	1	4,66	4,66 ± 0,00
	2	4,66	
	3	4,66	

Lampiran 18 Kelulusan Kode Etik

Kemenkes Poltekkes Bandung

POLITEKNIK KESEHATAN KEMENKES BANDUNG
KOMITE ETIK PENELITIAN KESEHATAN (KEPK)
Sekretariat : Direktorat Poltekkes Kemenkes Bandung
Jl. Pajajaran No. 56. e-mail kepk@poltekkesbandung.ac.id

KETERANGAN LAYAK ETIK
DESCRIPTION OF ETHICAL APPROVAL
"ETHICAL APPROVAL"

No.342/KEPK/EC/IV/2026

Protokol penelitian versi 2 yang diusulkan oleh :
The research protocol proposed by

Peneliti utama : Tanzila Alya Rahma
Principal In Investigator

Nama Institusi : Poltekkes Kemenkes Bandung
Name of the Institution

Dengan judul:
Title

"Formulasi dan Evaluasi Sediaan Gummy Candy Kombinasi Kurkumin Liposomal dan Zinc Gluconate Sebagai Suplemen dengan Aktivitas Imunomodulator"

"Formulation and Evaluation of a Gummy Candy Preparation Combining Liposomal Curcumin and Zinc Gluconate as a Supplement with Immunomodulatory Activity"

Dinyatakan layak etik sesuai 7 (tujuh) Standar WHO 2011, yaitu 1) Nilai Sosial, 2) Nilai Ilmiah, 3) Pemerataan Beban dan Manfaat, 4) Risiko, 5) Bujukan/Eksploitasi, 6) Kerahasiaan dan Privacy, dan 7) Persetujuan Setelah Penjelasan, yang merujuk pada Pedoman CIOMS 2016. Hal ini seperti yang ditunjukkan oleh terpenuhinya indikator setiap standar.

Declared to be ethically appropriate in accordance to 7 (seven) WHO 2011 Standards, 1) Social Values, 2) Scientific Values, 3) Equitable Assessment and Benefits, 4) Risks, 5) Persuasion/Exploitation, 6) Confidentiality and Privacy, and 7) Informed Concent, referring to the 2016 CIOMS Guidelines. This is as indicated by the fulfillment of the indicators of each standard.

Pernyataan Laik Etik ini berlaku selama kurun waktu tanggal 07 April 2026 sampai dengan tanggal 07 April 2027.

This declaration of ethics applies during the period April 07, 2026 until April 07, 2027.

April 07, 2026
Chairperson,

Dr.Titi Nurhayati.SKM.MKM

Lampiran 19 *Certificate of Anaysis (COA)* Kurkumin

Certificate of Analysis

General Information			
Product Name	Turmeric Extract	Herbal Part Used	Root
Botanical Source:	Radix curcumae longae	QTY	1000kg
Batch No.	20190722	Report Date	2019-07-22
Produce date	2019-07-22	Expire Date	2021-03-21
Item	**Specification**	**Method**	**Result**
Physical Property			
Appearance	Yellow orange powder	Organoleptic	Conforms
Odor & taste	Characteristic	Organoleptic	Conforms
Solubility	Soluble in ethanol acetone and glacial acetic acid	Organoleptic	Conforms
General Analysis			
Test Method	IR spectrum	HPLC	Conforms
Curcuminoids	≥95%	HPLC	95.07%
Curcumin	70%-80%	HPLC	72.7%
Demethoxy Curcumin	15%-25%	HPLC	18.0%
Bisdemethoxy Curcumin	2.5%-6.5%	HPLC	4.37%
Extract Solvents	Ethyl acetate	/	Conforms
Sieve analysis	100% pass 80 mesh	CP2015	Complies
Loss on Drying	≤2 %	GB/T5009.3-2016 Direct dry way	0.82%
The Total Ash	≤1%	GB/T5009.4-2016/5.3.3	0.78%
Tap density g/ml	0.5-0.9	GB/T21354-2008	0.58
Bulk density g/ml	0.3-0.5	GB/T20316.2-2006	0.35
Contaminants			
Residual Solvent	≤0.5%	CP2015	0.35%
Heavy Metal	≤10ppm	GB/T5009.74-2003	<10ppm
Arsenic(As)	≤3ppm	GB/T5009.11-2014	0.11ppm
Lead(Pb)	≤2ppm	GB/T5009.12-2017	0.13ppm
Cadmium(Cd)	≤1ppm	GB/T5009.15-2003	0.20ppm
Mercury(Hg)	≤0.5ppm	GB/T5009.17-2003	0.10ppm
Microbiological			
Total Plate Count	<1,000CFU/g	AOAC	Complies
Yeast & Mold	<100CFU/g	AOAC	Complies
E.Coli	Negative	AOAC	Negative
Salmonella	Negative	AOAC	Negative
Staph-aureus	Negative	AOAC	Negative
Shelf Life	24 months under the conditions below, no antioxidant used		
Package	20 kg/drum outside and double food plastic bags inside.		
Storage	Store in a cool and dry place away from Moisture, Light, Oxygen		
Remark	NON- Irradiated		

Analyzed by: Li Lei Checked by: Feng Aiguo Approved by: Zhang Qian

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Lampiran 20 ***Certificate of Analysis (COA) Zinc gluconate***

瑞普®

[redacted]生物工程有限公司
[redacted] BIOLOGICAL ENGINEERING CO.,LTD

产品检验报告单

Certificate of product Analysis

品　名	Product	葡萄糖酸锌	级　别	Grade	食品级
批　号	Batch No	20250228063	生产日期	Manufacturing Date	2025.02.28
生产数量	Product Quantity	1575kg	规　格	Specification	25kg/桶
保质期	Minimum Shelf Life	18 个月	检验依据	Analysis Standard	GB 8820-2010

检验项目 Items of Test	标准 Standard	检验结果 Test Results
标签、净含量及感官要求		
标签	应符合规定	符合规定
净含量	25kg	符合规定
感官要求	白色或类白色颗粒或晶状粉末	符合规定
理化指标		
葡萄糖酸锌（$C_{12}H_{22}O_{14}Zn_2$以干基计），ω/%	97.0-102.0	99.95
干燥减量，ω/%	≤11.6	7.56
氯化物（以Cl计），ω/%	≤0.05	<0.05
硫酸盐（以SO_4计），ω/%	≤0.05	<0.05
还原物质（以$C_6H_{12}O_6$计），ω/%	≤1.0	<1.0
PH（10.0g/L溶液）	5.5-7.5	5.69
铅（Pb）/(mg/kg)	≤3.0	<3.0
砷（As）/(mg/kg)	≤3.0	<3.0
镉（Cd）/(mg/kg)	≤2.0	<2.0
特殊项目		
无		
*****以下空白*****		

结论 Conclusion　符合GB 8820-2010要求

[redacted]瑞普生物工程有限公司 检验专用章

检验者 Analyst　复核者 Checker　主管 Supervisor

欢迎访问 HTTP://www[redacted].com TEL:0371-[redacted] FAX:0371-[redacted] E-MAIL:[redacted].com

POKE EVE

Lampiran 21 Hasil Pengecekan Turnitin

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