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LAMPIRAN 1

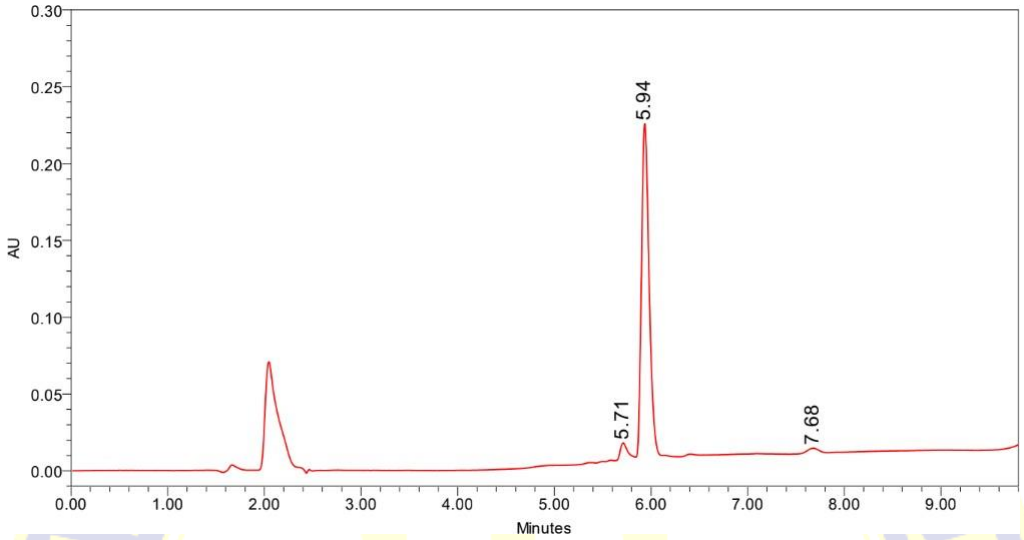
ISOLAT *MADECASSOSIDE*



Gambar VII. 1 Isolat *madecassoside* dari tumbuhan pegagan (*Centella asiatica* (L.))

LAMPIRAN 2

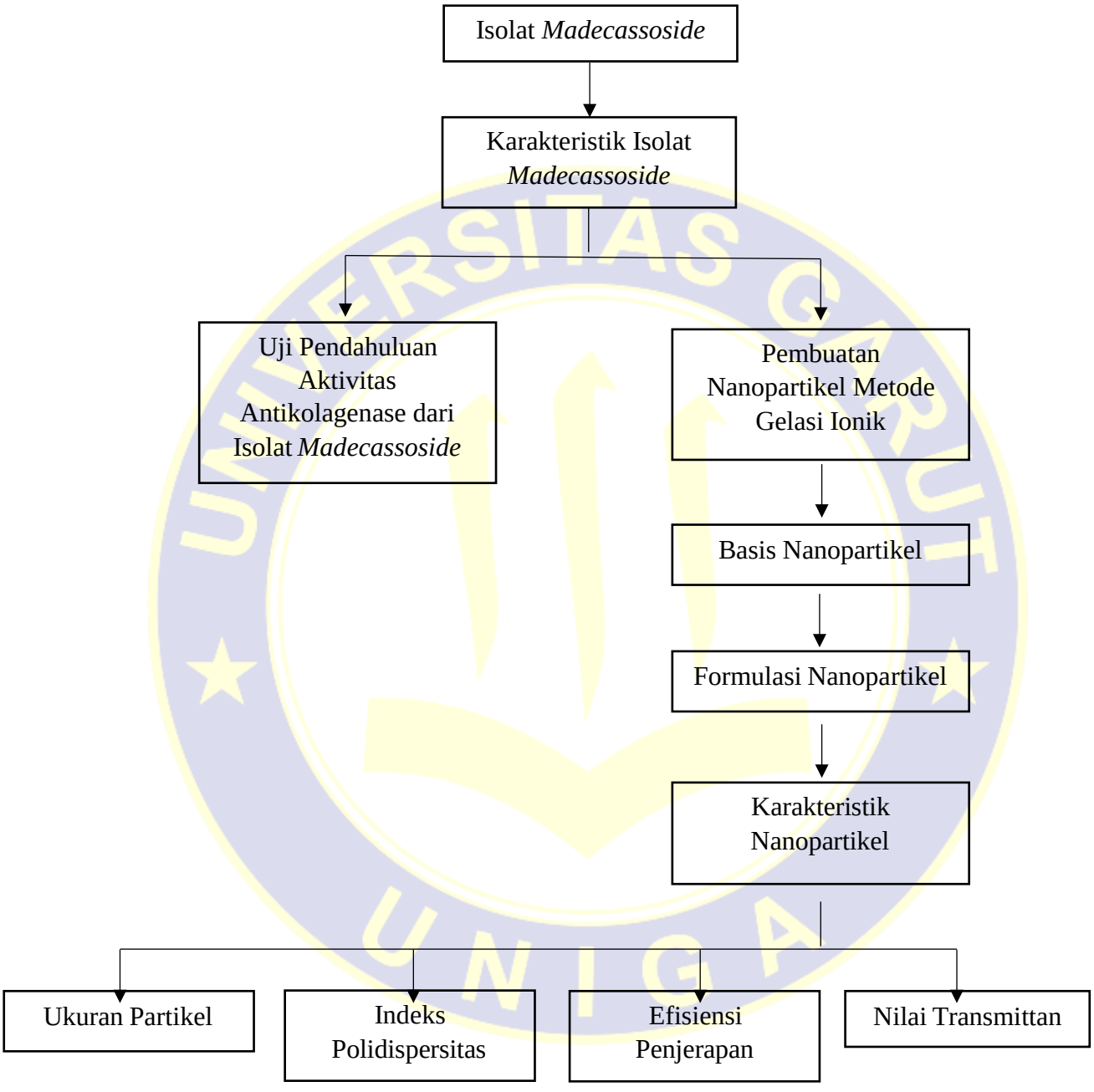
HASIL PENGUJIAN KARAKTERISTIK *MADECASSOSIDE*



Gambar VII. 2 Pengujian karakteristik *madecassoside* menggunakan HPLC

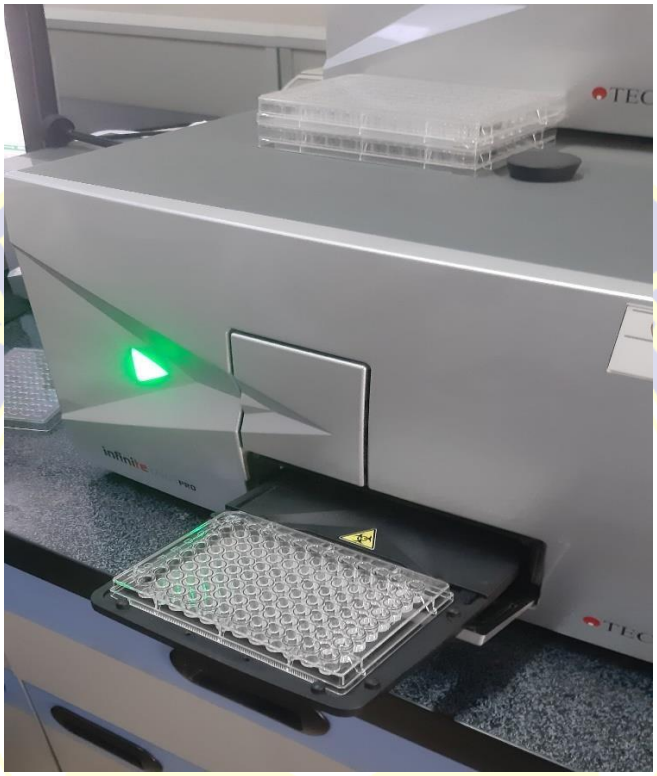
LAMPIRAN 3

ALUR PENELITIAN



LAMPIRAN 4

UJI PENDAHULUAN AKTIVITAS ANTIKOLAGENASE



Gambar VII. 3 Microplate reader

LAMPIRAN 5

UJI PENDAHULUAN NANOPARTIKEL KOSONG



(F1) (F2) (F3)



(S1) (S2) (S3)

Gambar VII. 4 Uji pendahuluan nanopartikel kosong

Keterangan :

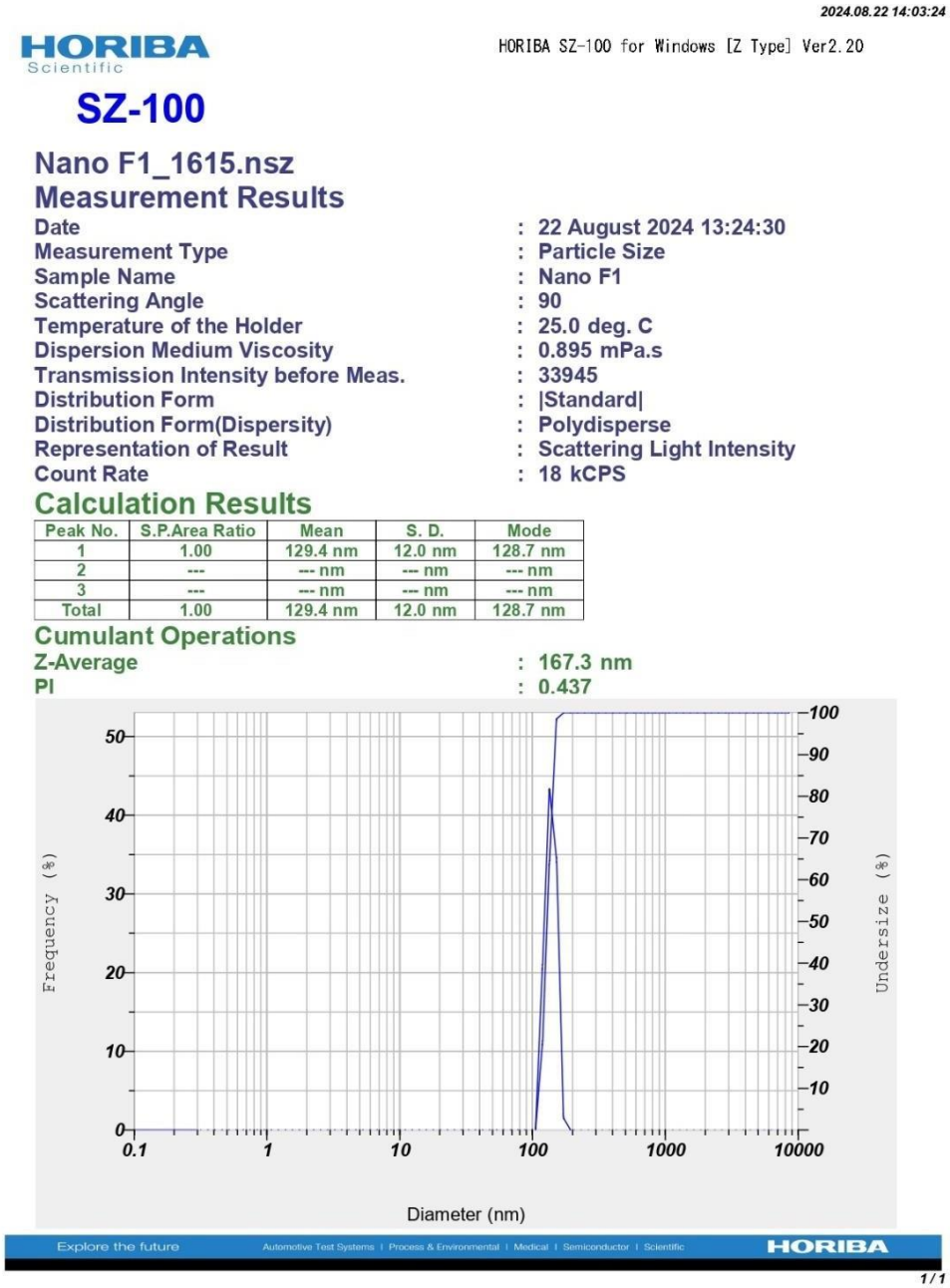
F1: Nanopartikel Kosong 1 **S1**: Supernatan Nanopartikel Kosong 1

F2: Nanopartikel Kosong 2 **S2**: Supernatan Nanopartikel Kosong 2

F3: Nanopartikel Kosong 3 **S3**: Supernatan Nanopartikel Kosong 3

LAMPIRAN 6

KURVA DISTRIBUSI UKURAN PARTIKEL NANOPARTIKEL KOSONG



2024.08.22 14:03:24

HORIBA Scientific

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

SZ-100

Nano F1_1615.nsz

Measurement Results

Date	: 22 August 2024 13:24:30
Measurement Type	: Particle Size
Sample Name	: Nano F1
Scattering Angle	: 90
Temperature of the Holder	: 25.0 deg. C
Dispersion Medium Viscosity	: 0.895 mPa.s
Transmission Intensity before Meas.	: 33945
Distribution Form	: |Standard|
Distribution Form(Dispersity)	: Polydisperse
Representation of Result	: Scattering Light Intensity
Count Rate	: 18 kCPS

Calculation Results

Peak No.	S.P.Area Ratio	Mean	S. D.	Mode
1	1.00	129.4 nm	12.0 nm	128.7 nm
2	---	--- nm	--- nm	--- nm
3	---	--- nm	--- nm	--- nm
Total	1.00	129.4 nm	12.0 nm	128.7 nm

Cumulant Operations

Z-Average	: 167.3 nm
PI	: 0.437

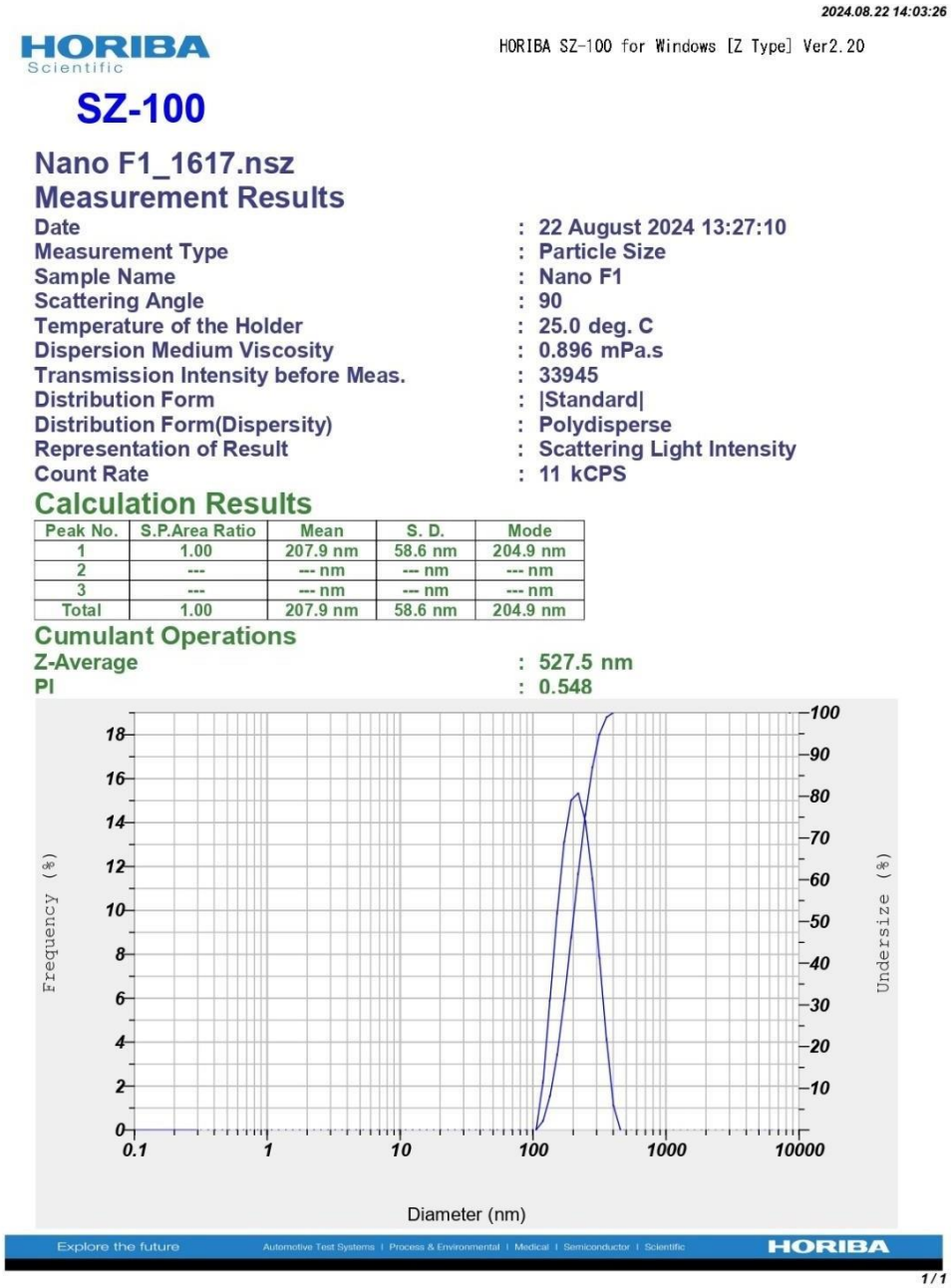
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1/1

Gambar VII. 5 Kurva distribusi ukuran partikel nanopartikel kosong 1 (1)

LAMPIRAN 6

(LANJUTAN)



2024.08.22 14:03:26

HORIBA Scientific

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

SZ-100

Nano F1_1617.nsz

Measurement Results

Date	: 22 August 2024 13:27:10
Measurement Type	: Particle Size
Sample Name	: Nano F1
Scattering Angle	: 90
Temperature of the Holder	: 25.0 deg. C
Dispersion Medium Viscosity	: 0.896 mPa.s
Transmission Intensity before Meas.	: 33945
Distribution Form	: |Standard|
Distribution Form(Dispersity)	: Polydisperse
Representation of Result	: Scattering Light Intensity
Count Rate	: 11 kCPS

Calculation Results

Peak No.	S.P.Area Ratio	Mean	S. D.	Mode
1	1.00	207.9 nm	58.6 nm	204.9 nm
2	---	--- nm	--- nm	--- nm
3	---	--- nm	--- nm	--- nm
Total	1.00	207.9 nm	58.6 nm	204.9 nm

Cumulant Operations

Z-Average	: 527.5 nm
PI	: 0.548

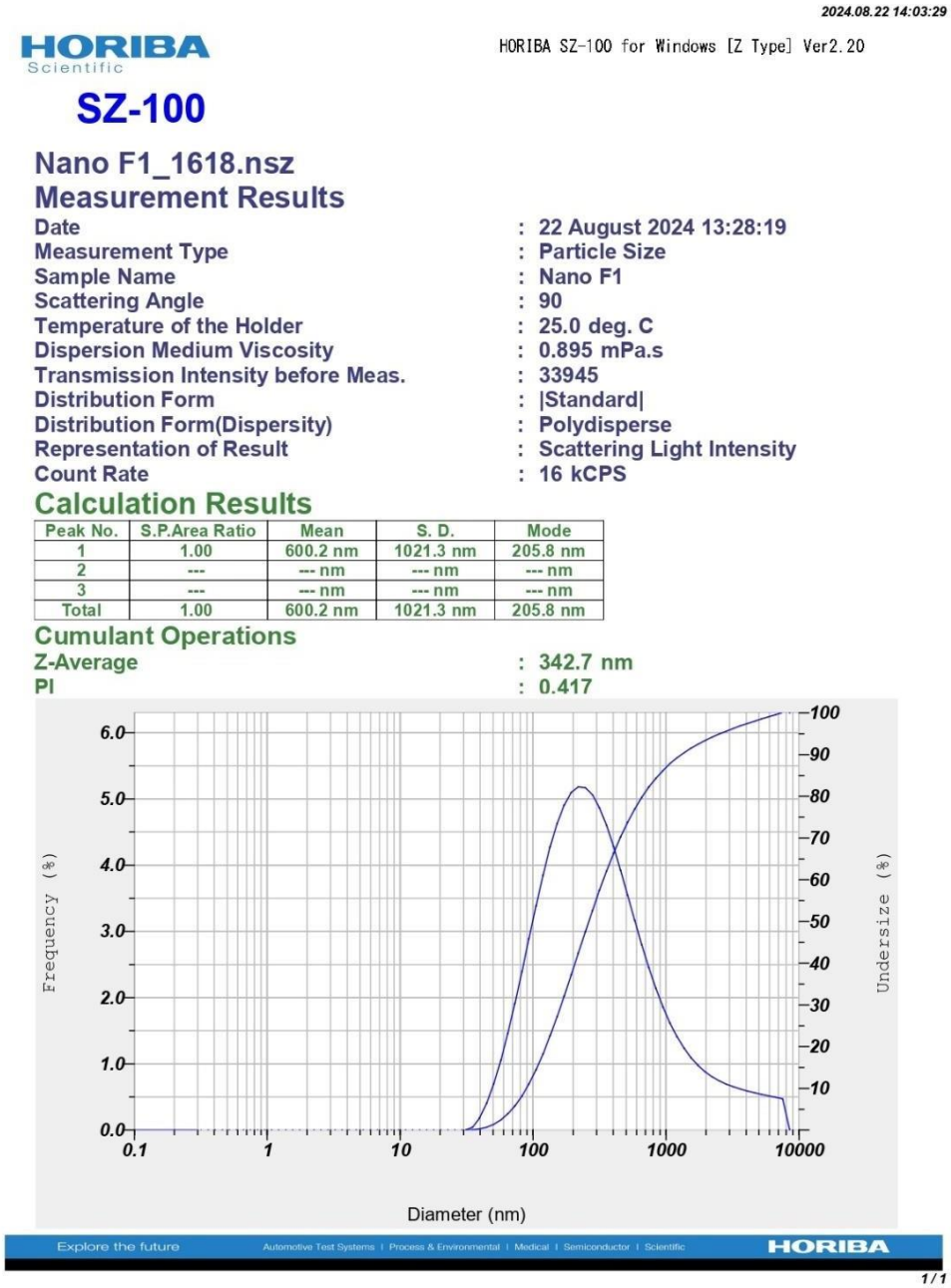
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Gambar VII. 6 Kurva distribusi ukuran partikel nanopartikel kosong 1 (2)

LAMPIRAN 6

(LANJUTAN)



2024.08.22 14:03:29

HORIBA Scientific

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

SZ-100

Nano F1_1618.nsz

Measurement Results

Date	: 22 August 2024 13:28:19
Measurement Type	: Particle Size
Sample Name	: Nano F1
Scattering Angle	: 90
Temperature of the Holder	: 25.0 deg. C
Dispersion Medium Viscosity	: 0.895 mPa.s
Transmission Intensity before Meas.	: 33945
Distribution Form	: |Standard|
Distribution Form(Dispersity)	: Polydisperse
Representation of Result	: Scattering Light Intensity
Count Rate	: 16 kCPS

Calculation Results

Peak No.	S.P.Area Ratio	Mean	S. D.	Mode
1	1.00	600.2 nm	1021.3 nm	205.8 nm
2	---	--- nm	--- nm	--- nm
3	---	--- nm	--- nm	--- nm
Total	1.00	600.2 nm	1021.3 nm	205.8 nm

Cumulant Operations

Z-Average	: 342.7 nm
PI	: 0.417

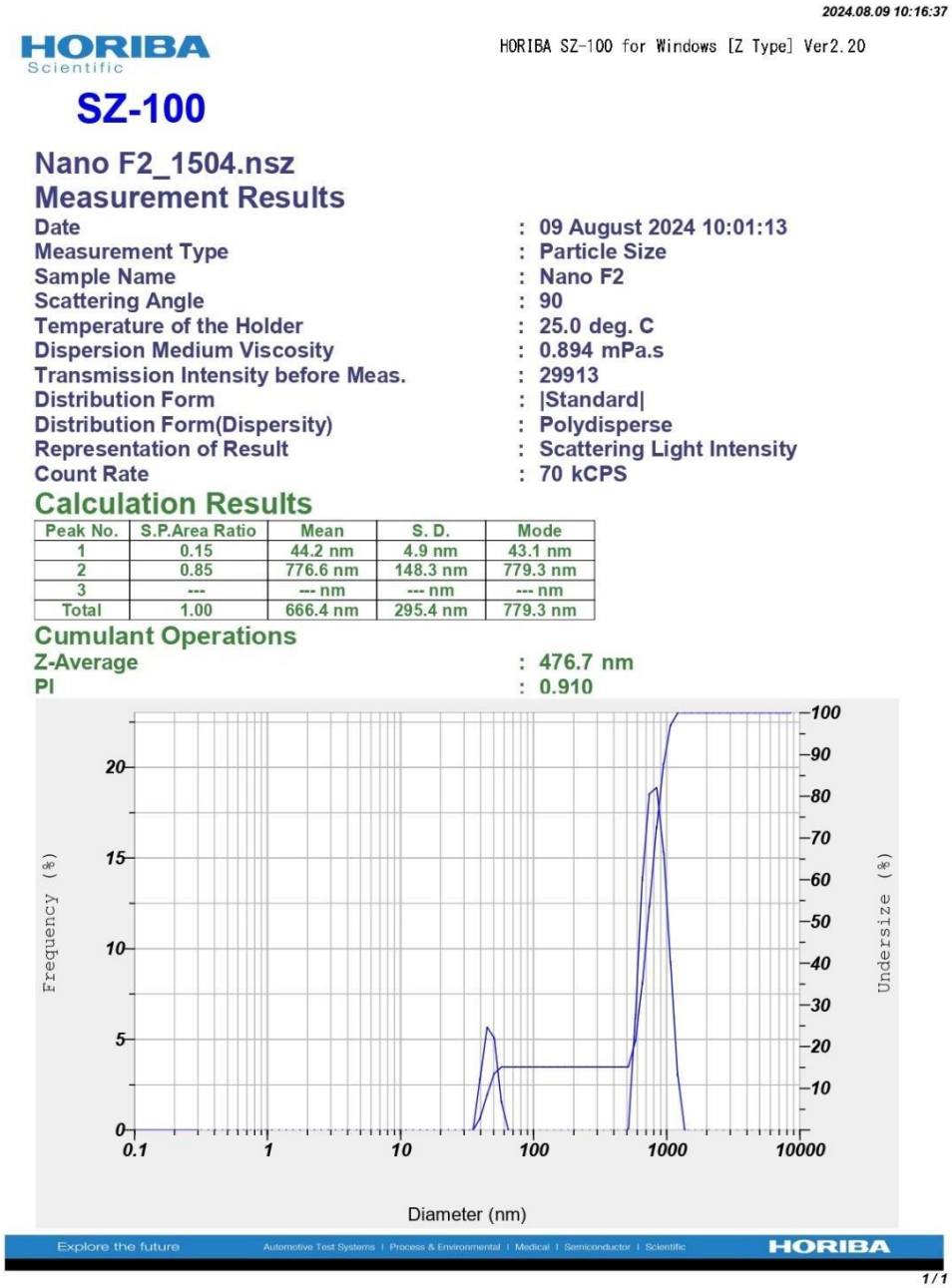
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Gambar VII. 7 Kurva distribusi ukuran partikel nanopartikel kosong 1 (3)

LAMPIRAN 6

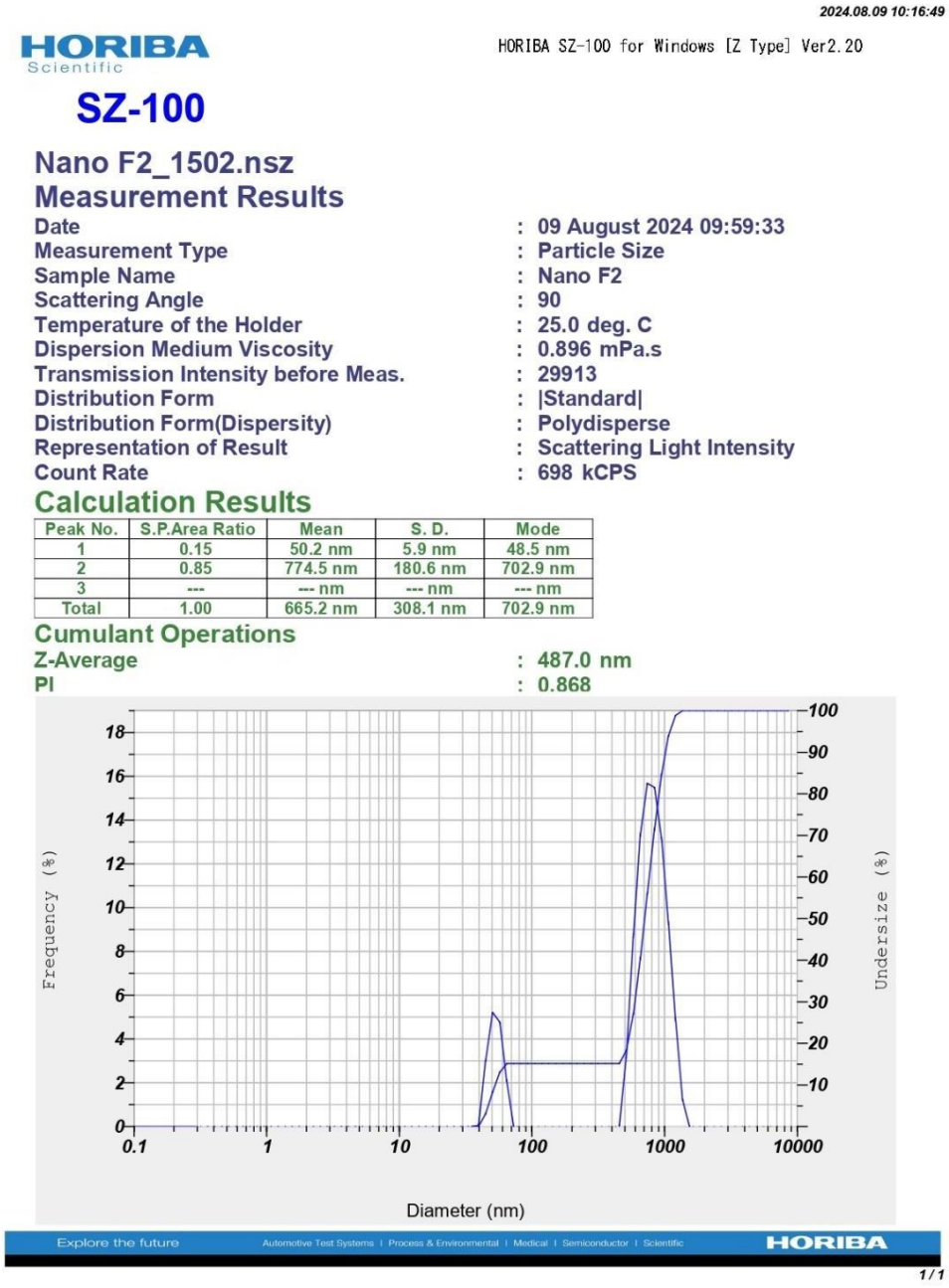
(LANJUTAN)



Gambar VII. 8 Kurva distribusi ukuran partikel nanopartikel kosong 2 (1)

LAMPIRAN 6

(LANJUTAN)



2024.08.09 10:16:49

HORIBA Scientific

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

SZ-100

Nano F2_1502.nsz

Measurement Results

Date	: 09 August 2024 09:59:33
Measurement Type	: Particle Size
Sample Name	: Nano F2
Scattering Angle	: 90
Temperature of the Holder	: 25.0 deg. C
Dispersion Medium Viscosity	: 0.896 mPa.s
Transmission Intensity before Meas.	: 29913
Distribution Form	: |Standard|
Distribution Form(Dispersity)	: Polydisperse
Representation of Result	: Scattering Light Intensity
Count Rate	: 698 kCPS

Calculation Results

Peak No.	S.P.Area Ratio	Mean	S. D.	Mode
1	0.15	50.2 nm	5.9 nm	48.5 nm
2	0.85	774.5 nm	180.6 nm	702.9 nm
3	---	--- nm	--- nm	--- nm
Total	1.00	665.2 nm	308.1 nm	702.9 nm

Cumulant Operations

Z-Average	: 487.0 nm
PI	: 0.868

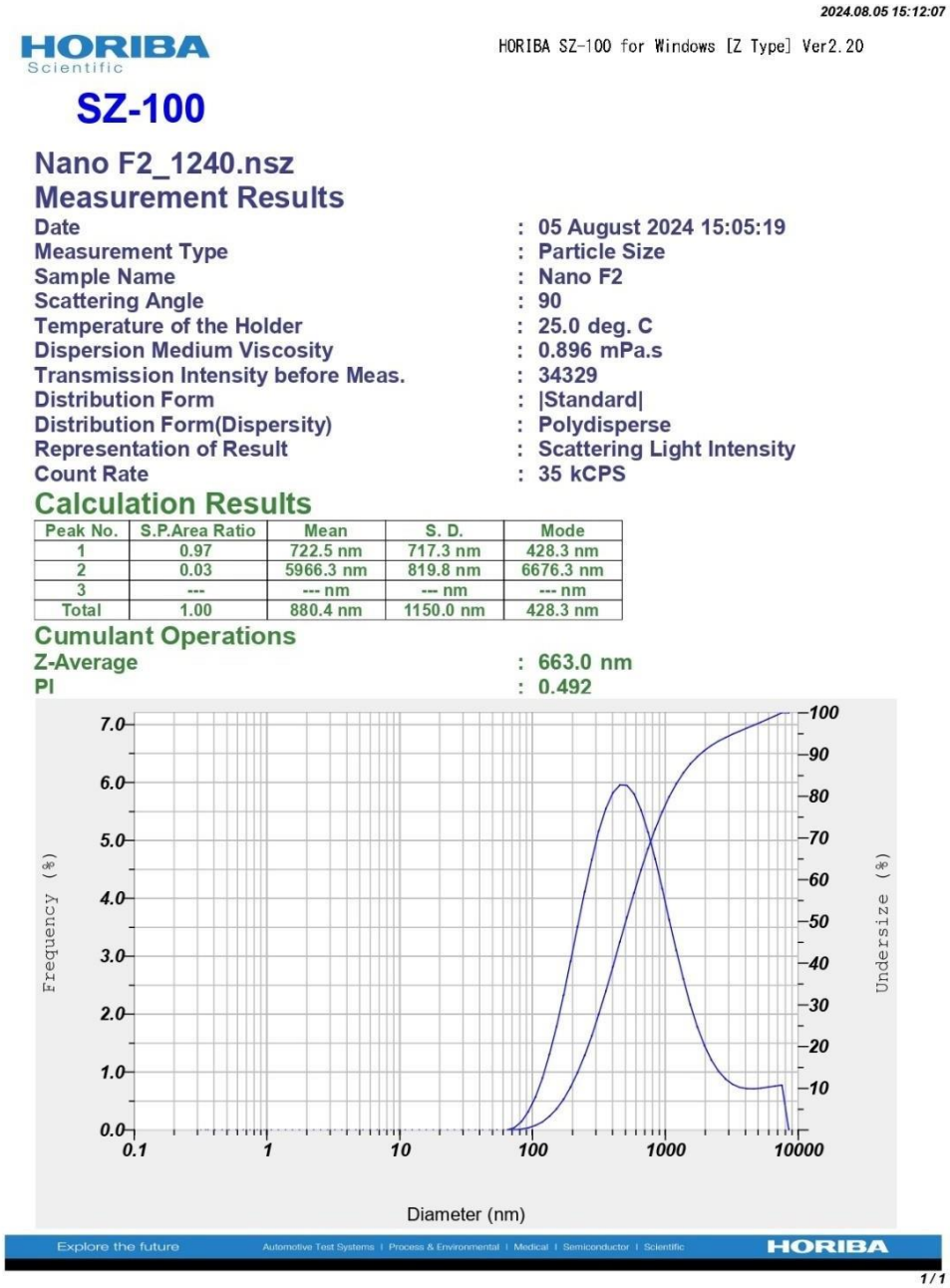
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Gambar VII. 9 Kurva distribusi ukuran partikel nanopartikel kosong 2 (2)

LAMPIRAN 6

(LANJUTAN)



2024.08.05 15:12:07

HORIBA Scientific

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

SZ-100

Nano F2_1240.nsz

Measurement Results

Date	: 05 August 2024 15:05:19
Measurement Type	: Particle Size
Sample Name	: Nano F2
Scattering Angle	: 90
Temperature of the Holder	: 25.0 deg. C
Dispersion Medium Viscosity	: 0.896 mPa.s
Transmission Intensity before Meas.	: 34329
Distribution Form	: |Standard|
Distribution Form(Dispersity)	: Polydisperse
Representation of Result	: Scattering Light Intensity
Count Rate	: 35 kCPS

Calculation Results

Peak No.	S.P.Area Ratio	Mean	S. D.	Mode
1	0.97	722.5 nm	717.3 nm	428.3 nm
2	0.03	5966.3 nm	819.8 nm	6676.3 nm
3	---	--- nm	--- nm	--- nm
Total	1.00	880.4 nm	1150.0 nm	428.3 nm

Cumulant Operations

Z-Average	: 663.0 nm
PI	: 0.492

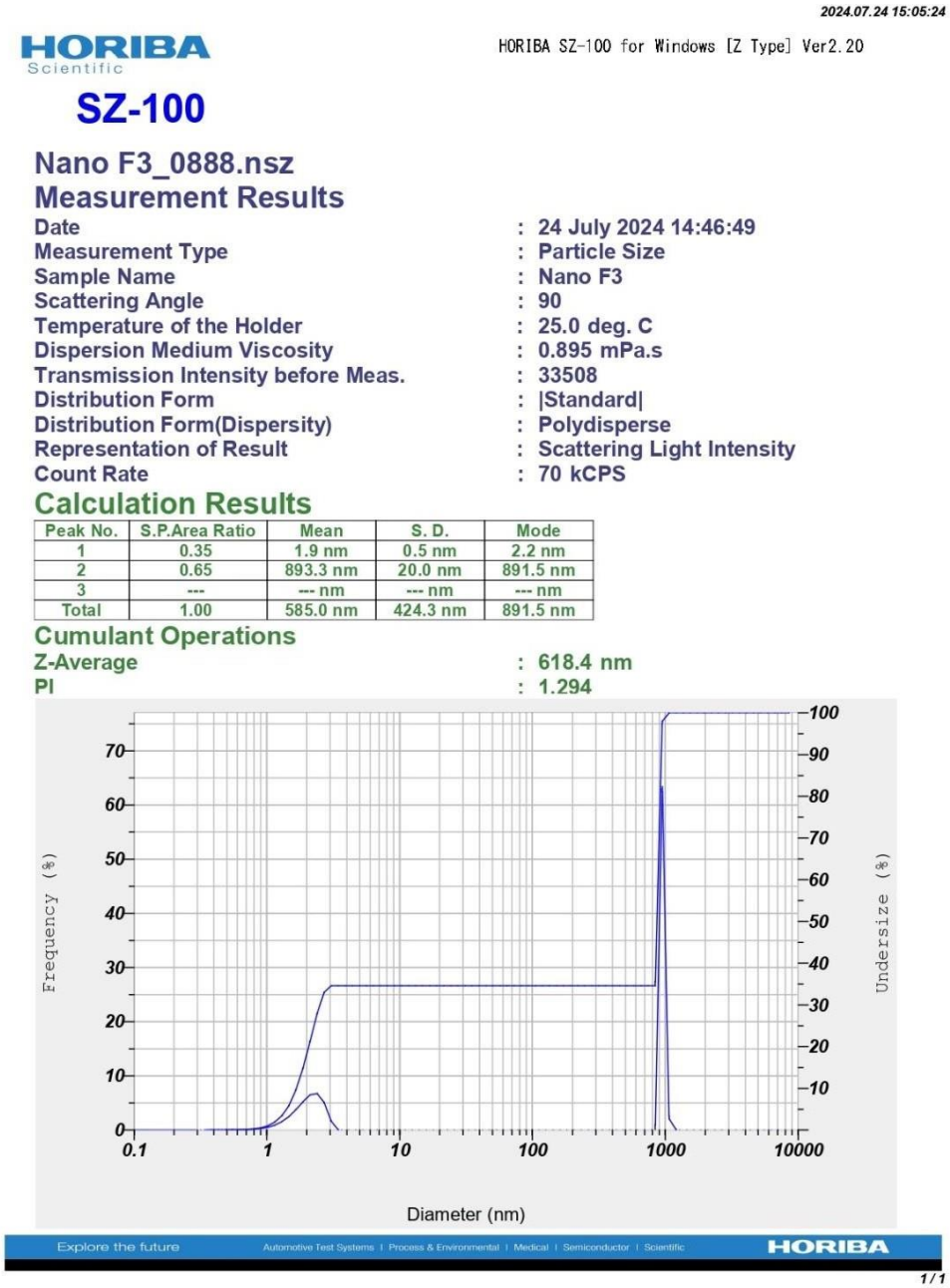
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Gambar VII. 10 Kurva distribusi ukuran partikel nanopartikel kosong 2 (3)

LAMPIRAN 6

(LANJUTAN)



2024.07.24 15:05:24

HORIBA Scientific

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

SZ-100

Nano F3_0888.nsz

Measurement Results

Date	: 24 July 2024 14:46:49
Measurement Type	: Particle Size
Sample Name	: Nano F3
Scattering Angle	: 90
Temperature of the Holder	: 25.0 deg. C
Dispersion Medium Viscosity	: 0.895 mPa.s
Transmission Intensity before Meas.	: 33508
Distribution Form	: |Standard|
Distribution Form(Dispersity)	: Polydisperse
Representation of Result	: Scattering Light Intensity
Count Rate	: 70 kCPS

Calculation Results

Peak No.	S.P.Area Ratio	Mean	S. D.	Mode
1	0.35	1.9 nm	0.5 nm	2.2 nm
2	0.65	893.3 nm	20.0 nm	891.5 nm
3	---	--- nm	--- nm	--- nm
Total	1.00	585.0 nm	424.3 nm	891.5 nm

Cumulant Operations

Z-Average	: 618.4 nm
PI	: 1.294

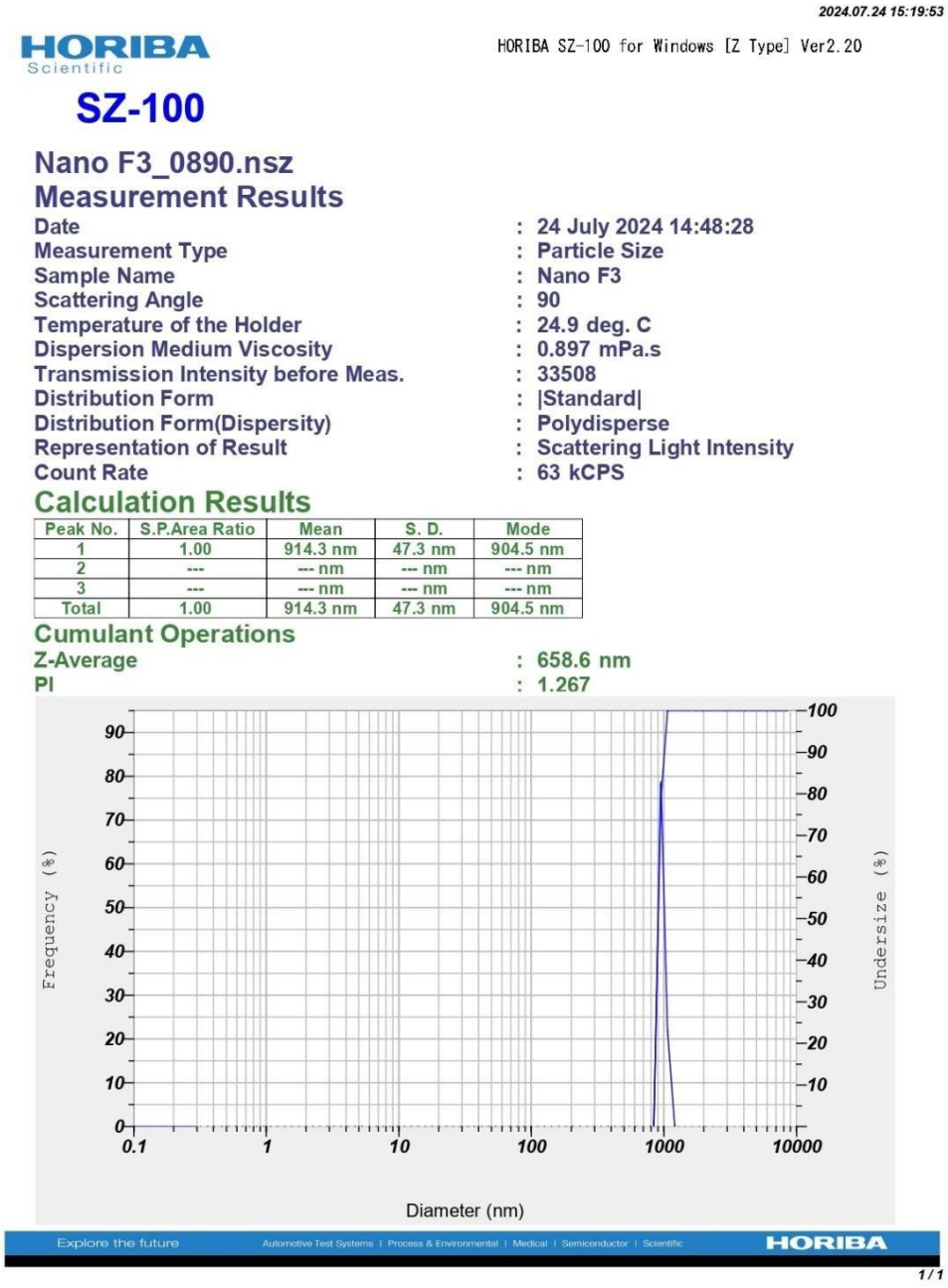
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1/1

Gambar VII. 11 Kurva distribusi ukuran partikel nanopartikel kosong 3 (1)

LAMPIRAN 6

(LANJUTAN)



2024.07.24 15:19:53

HORIBA Scientific

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

SZ-100

Nano F3_0890.nsz

Measurement Results

Date	: 24 July 2024 14:48:28
Measurement Type	: Particle Size
Sample Name	: Nano F3
Scattering Angle	: 90
Temperature of the Holder	: 24.9 deg. C
Dispersion Medium Viscosity	: 0.897 mPa.s
Transmission Intensity before Meas.	: 33508
Distribution Form	: |Standard|
Distribution Form(Dispersity)	: Polydisperse
Representation of Result	: Scattering Light Intensity
Count Rate	: 63 kCPS

Calculation Results

Peak No.	S.P.Area Ratio	Mean	S. D.	Mode
1	1.00	914.3 nm	47.3 nm	904.5 nm
2	---	--- nm	--- nm	--- nm
3	---	--- nm	--- nm	--- nm
Total	1.00	914.3 nm	47.3 nm	904.5 nm

Cumulant Operations

Z-Average	: 658.6 nm
PI	: 1.267

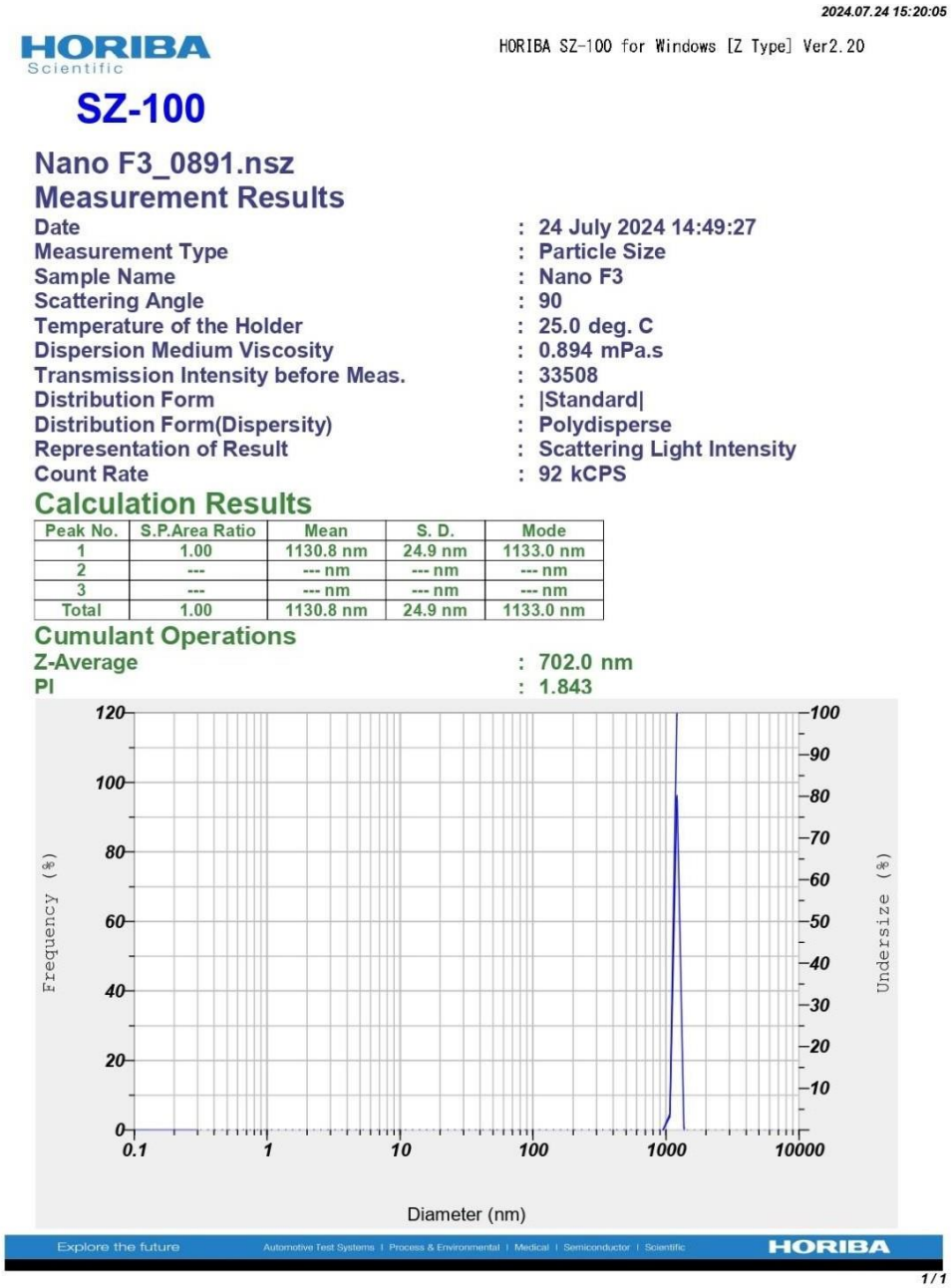
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1/1

Gambar VII. 12 Kurva distribusi ukuran partikel nanopartikel kosong 3 (2)

LAMPIRAN 6

(LANJUTAN)



2024.07.24 15:20:05

HORIBA Scientific

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

SZ-100

Nano F3_0891.nsz

Measurement Results

Date	: 24 July 2024 14:49:27
Measurement Type	: Particle Size
Sample Name	: Nano F3
Scattering Angle	: 90
Temperature of the Holder	: 25.0 deg. C
Dispersion Medium Viscosity	: 0.894 mPa.s
Transmission Intensity before Meas.	: 33508
Distribution Form	: |Standard|
Distribution Form(Dispersity)	: Polydisperse
Representation of Result	: Scattering Light Intensity
Count Rate	: 92 kCPS

Calculation Results

Peak No.	S.P.Area Ratio	Mean	S. D.	Mode
1	1.00	1130.8 nm	24.9 nm	1133.0 nm
2	---	--- nm	--- nm	--- nm
3	---	--- nm	--- nm	--- nm
Total	1.00	1130.8 nm	24.9 nm	1133.0 nm

Cumulant Operations

Z-Average	: 702.0 nm
PI	: 1.843

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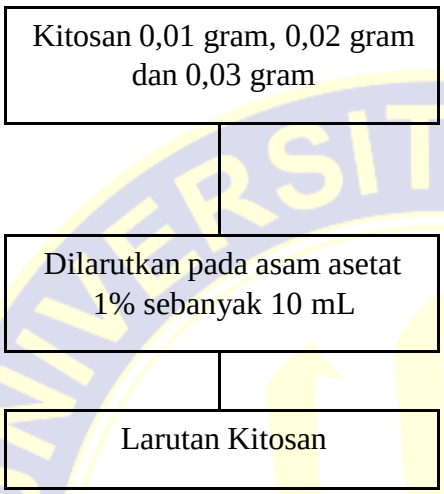
1/1

Gambar VII. 13 Kurva distribusi ukuran partikel nanopartikel kosong 3 (3)

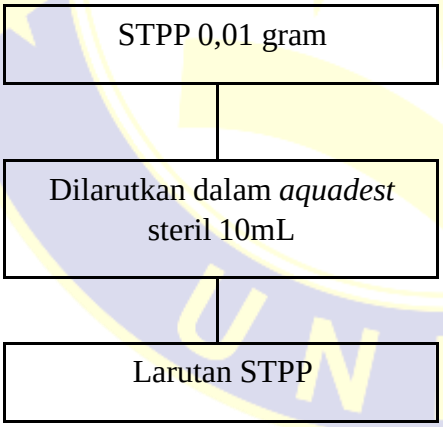
LAMPIRAN 7

ALUR PEMBUATAN NANOPARTIKEL

1. Pembuatan Larutan Kitosan

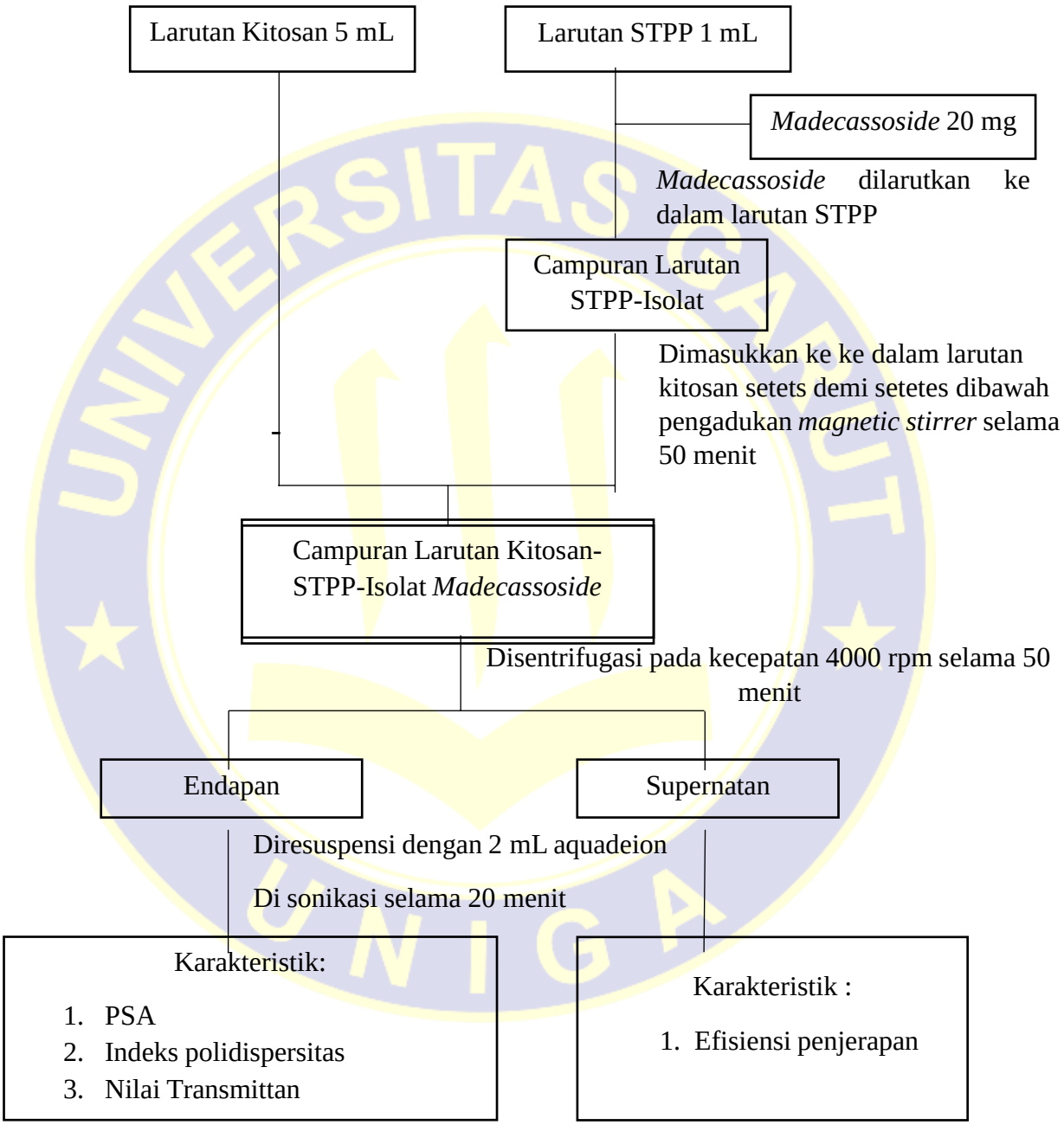


2. Pembuatan Larutan Sodium Tripolifosfat



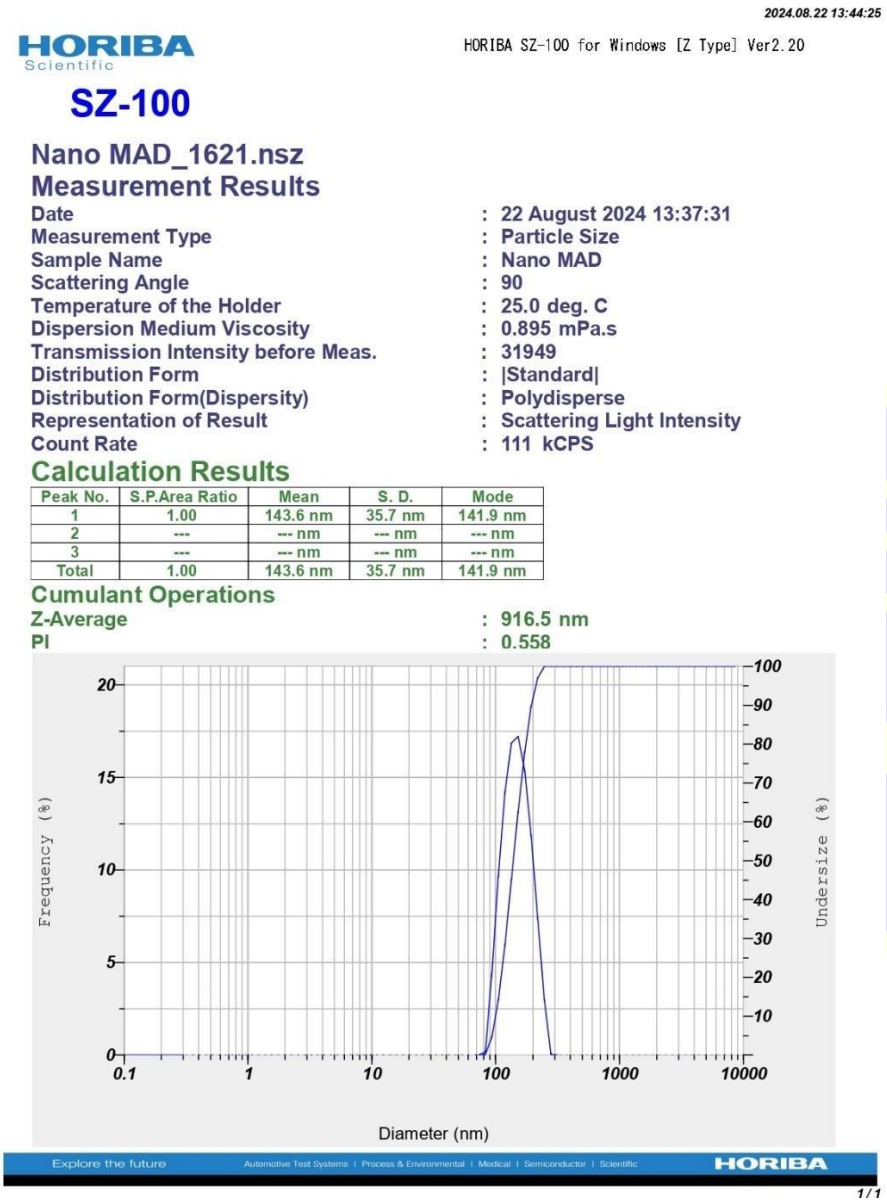
LAMPIRAN 7
(LANJUTAN)

3. Formulasi Nanopartikel Kitosan-STPP



LAMPIRAN 8

DISTRIBUSI UKURAN PARTIKEL FORMULASI NANOPARTIKEL



2024.08.22 13:44:25

HORIBA Scientific

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

SZ-100

Nano MAD_1621.nsz
Measurement Results

Date	: 22 August 2024 13:37:31
Measurement Type	: Particle Size
Sample Name	: Nano MAD
Scattering Angle	: 90
Temperature of the Holder	: 25.0 deg. C
Dispersion Medium Viscosity	: 0.895 mPa.s
Transmission Intensity before Meas.	: 31949
Distribution Form	: |Standard|
Distribution Form(Dispersity)	: Polydisperse
Representation of Result	: Scattering Light Intensity
Count Rate	: 111 kCPS

Calculation Results

Peak No.	S.P.Area Ratio	Mean	S. D.	Mode
1	1.00	143.6 nm	35.7 nm	141.9 nm
2	---	--- nm	--- nm	--- nm
3	---	--- nm	--- nm	--- nm
Total	1.00	143.6 nm	35.7 nm	141.9 nm

Cumulant Operations

Z-Average	: 916.5 nm
PI	: 0.558

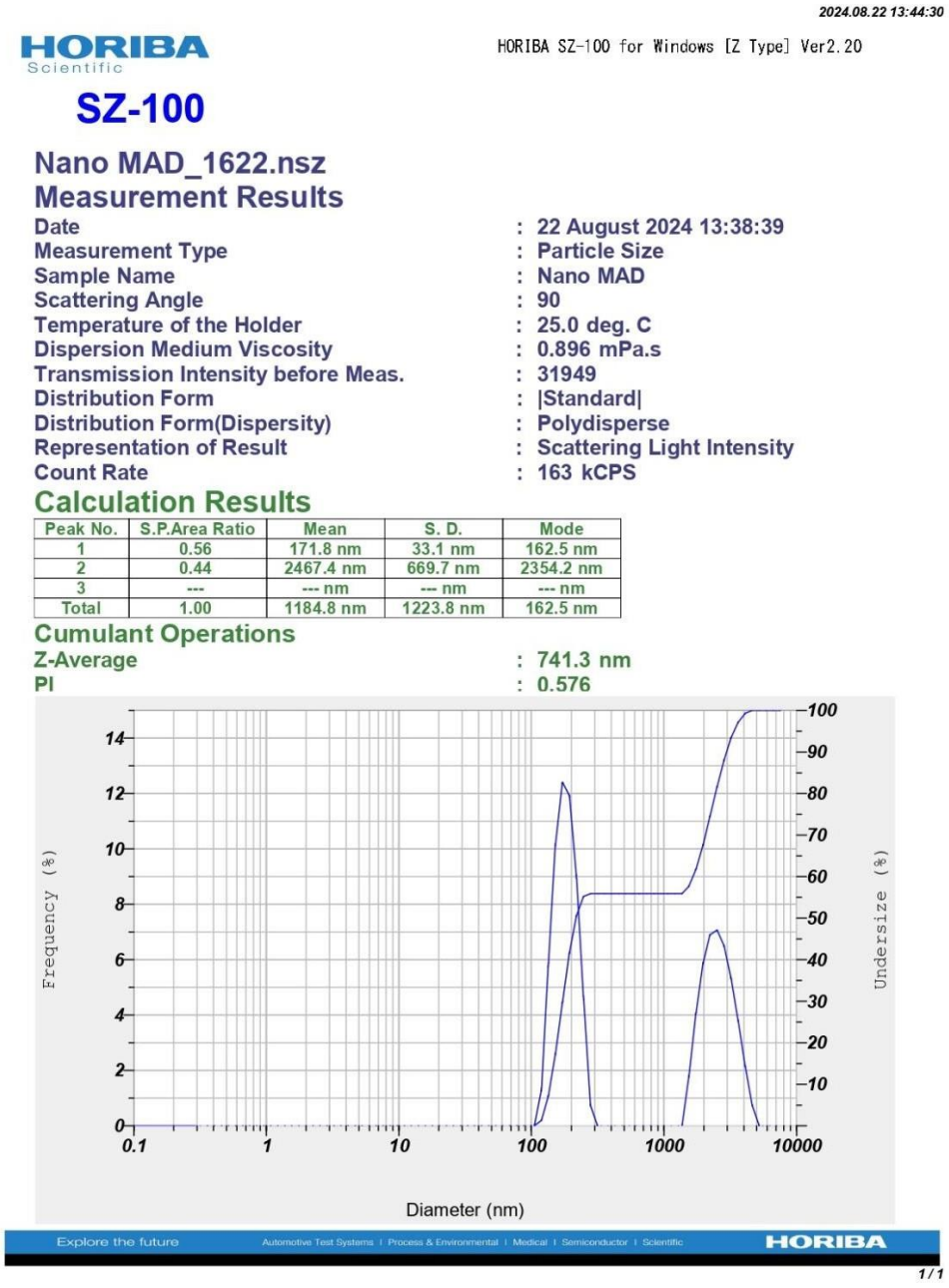
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Gambar VII. 14 Kurva distribusi ukuran partikel formulasi nanopartikel *madecassoside* (1)

LAMPIRAN 8

(LANJUTAN)



2024.08.22 13:44:30

HORIBA Scientific

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

SZ-100

Nano MAD_1622.nsz

Measurement Results

Date	: 22 August 2024 13:38:39
Measurement Type	: Particle Size
Sample Name	: Nano MAD
Scattering Angle	: 90
Temperature of the Holder	: 25.0 deg. C
Dispersion Medium Viscosity	: 0.896 mPa.s
Transmission Intensity before Meas.	: 31949
Distribution Form	: |Standard|
Distribution Form(Dispersity)	: Polydisperse
Representation of Result	: Scattering Light Intensity
Count Rate	: 163 kCPS

Calculation Results

Peak No.	S.P.Area Ratio	Mean	S. D.	Mode
1	0.56	171.8 nm	33.1 nm	162.5 nm
2	0.44	2467.4 nm	669.7 nm	2354.2 nm
3	---	--- nm	--- nm	--- nm
Total	1.00	1184.8 nm	1223.8 nm	162.5 nm

Cumulant Operations

Z-Average	: 741.3 nm
PI	: 0.576

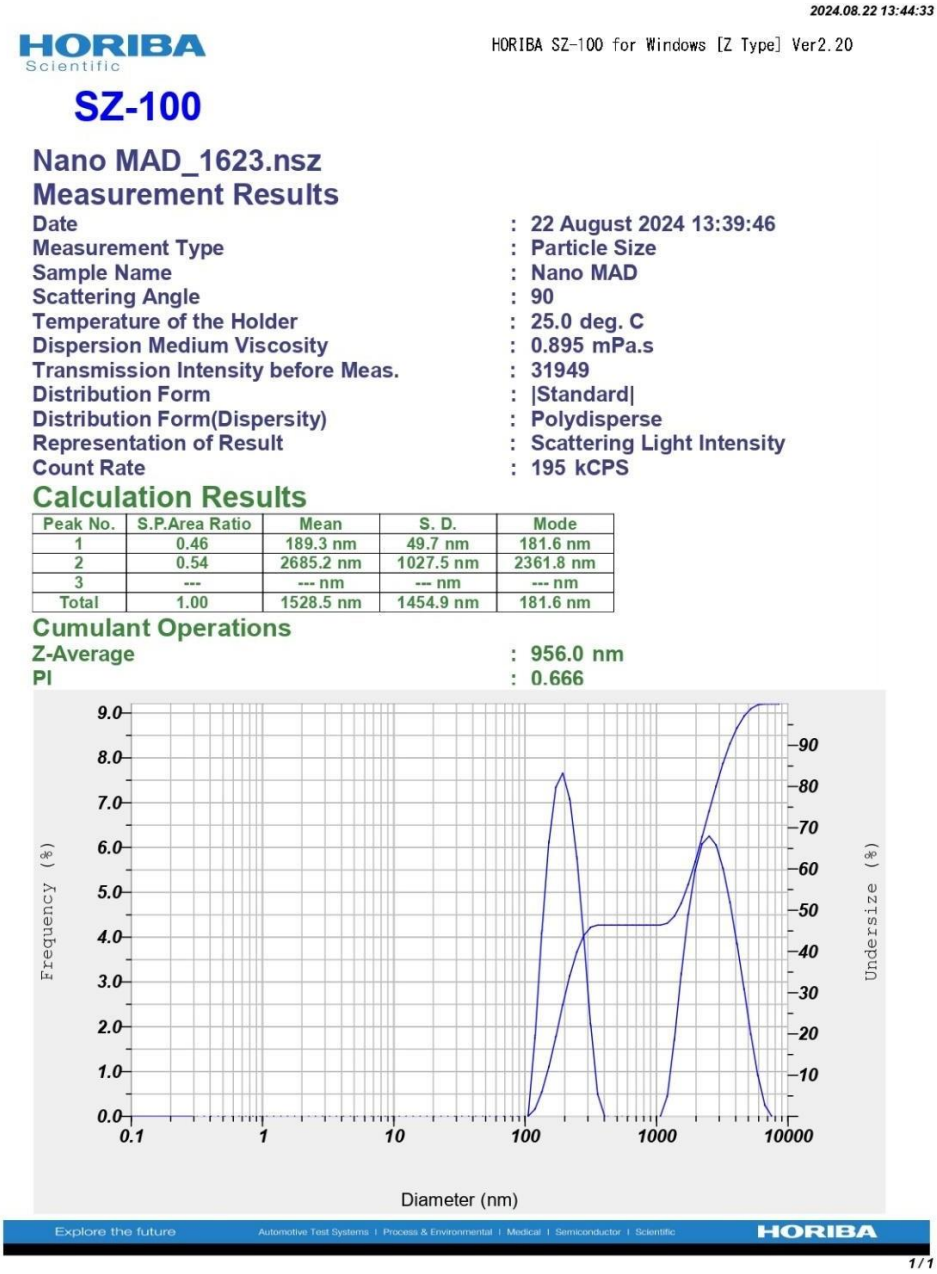
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Gambar VII. 15 Kurva distribusi ukuran partikel formulasi nanopartikel *madecassoside* (2)

LAMPIRAN 8

(LANJUTAN)



2024.08.22 13:44:33

HORIBA Scientific

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

SZ-100

Nano MAD_1623.nsz

Measurement Results

Date	: 22 August 2024 13:39:46
Measurement Type	: Particle Size
Sample Name	: Nano MAD
Scattering Angle	: 90
Temperature of the Holder	: 25.0 deg. C
Dispersion Medium Viscosity	: 0.895 mPa.s
Transmission Intensity before Meas.	: 31949
Distribution Form	: |Standard|
Distribution Form(Dispersity)	: Polydisperse
Representation of Result	: Scattering Light Intensity
Count Rate	: 195 kCPS

Calculation Results

Peak No.	S.P.Area Ratio	Mean	S. D.	Mode
1	0.46	189.3 nm	49.7 nm	181.6 nm
2	0.54	2685.2 nm	1027.5 nm	2361.8 nm
3	---	--- nm	--- nm	--- nm
Total	1.00	1528.5 nm	1454.9 nm	181.6 nm

Cumulant Operations

Z-Average	: 956.0 nm
PI	: 0.666

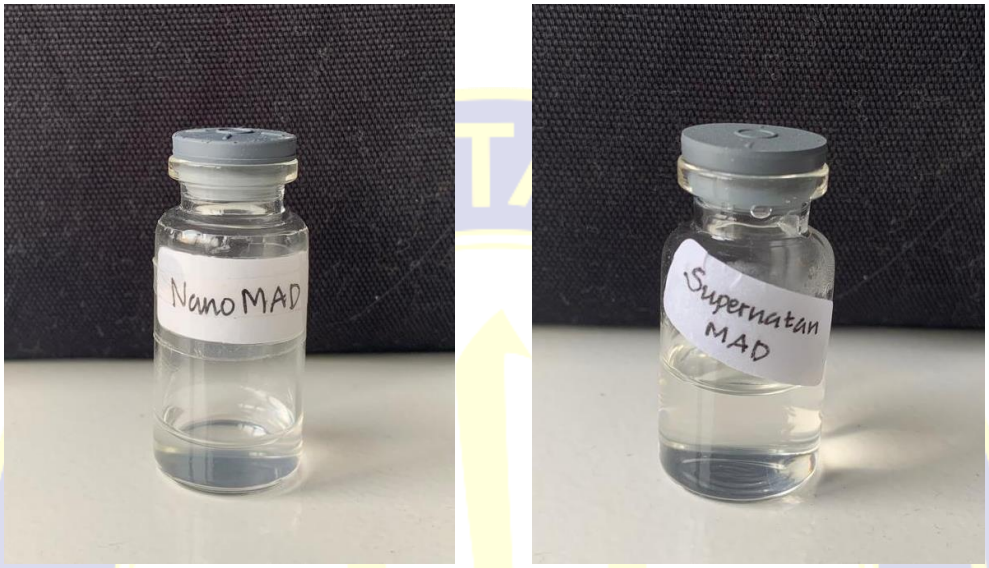
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Gambar VII. 16 Kurva distribusi ukuran partikel formulasi nanopartikel *madecassoside* (3)

LAMPIRAN 9

HASIL FORMULASI NANOPARTIKEL



(FMAD) (SMAD)

Gambar VII. 17 Hasil formulasi nanopartikel

Keterangan:

FMAD : Nanopartikel *Madecassoside*

SMAD: Supernatan *Madecassoside*

LAMPIRAN 10

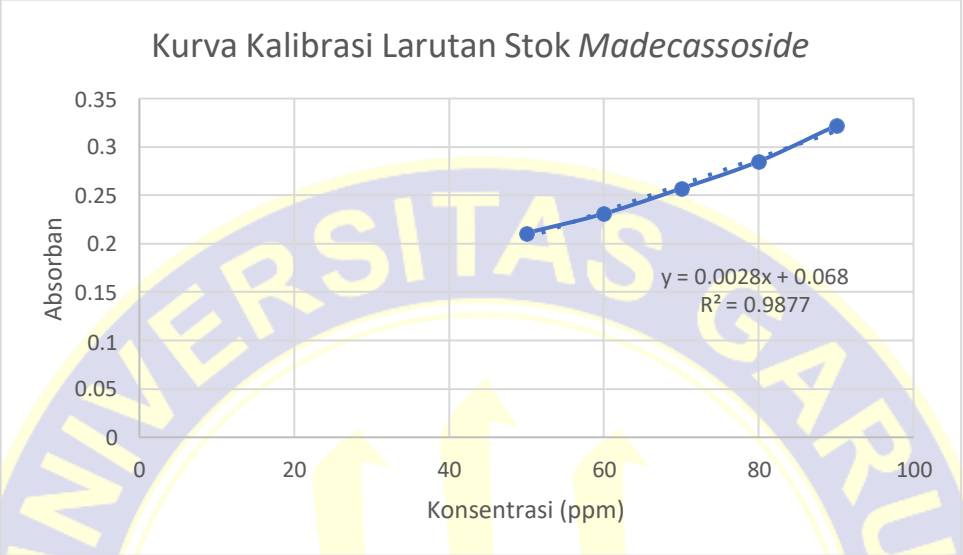
HASIL KARAKTERISTIK NILAI TRANSMITTAN



Gambar VII. 18 Hasil karakteristik nilai transmittan

LAMPIRAN 11

HASIL KARAKTERISTIK EFISENSI PENJERAPAN



Gambar VII. 19 Kurva Kalibrasi larutan stok *madecassoside*

DAFTAR RIWAYAT HIDUP

I. IDENTITAS DIRI



Nama : Sabella Mega Rustandi
Tempat, Tanggal Lahir : Tasikmalaya, 22 Agustus 2001
Jenis Kelamin : Perempuan
Agama : Islam
Kewarganegaraan : Indonesia
Status : Mahasiswa
Alamat : Kp. Cijaha RT 003 RW 002 Desa Simpang Kecamatan Bantarkalong Kabupaten Tasikmalaya Jawa Barat 46187
Telepon 081213691763
Email : sabellamega22@gmail.com

II. RIWAYAT PENDIDIKAN

Jenjang Pendidikan	Nama Sekolah/Perguruan Tinggi	Tahun Masuk	Tahun Lulus
Perguruan Tinggi	Universitas Garut	2020	2024
SMA/MA/SMK	SMKN Bantarkalong	2017	2020
SMP/MTs	SMPN 1 Bantarkalong	2014	2017
SD/MI	SDN 1 Parakanhonje	2008	2014

III. PENGALAMAN ORGANISASI

1. Badan Eksekutif Mahasiswa sebagai Bendahara Umum (2022-2024)
2. Organisasi Siswa Intrasekolah sebagai Bendahara Umum (2018-2019)
3. Organisasi Siswa Intrasekolah sebagai Wakil Bendahara (2017-2018)