

## LAMPIRAN

### Lampiran 1.1 Surat Pengajuan Penelitian



**Fakultas Ilmu Kesehatan**

Nomor : 104/II.3.AU/F/FIK/2023  
Lampiran : -  
Perihal : Surat Ijin Penelitian

Kepada Yth.  
**Direktur Rumah Sakit Umum Daerah Haji Surabaya**  
Di  
Tempat

*Assalamu'alaikum Wr. Wb.*

Dalam rangka menyelesaikan Tugas Akhir berupa Karya Tulis Ilmiah (KTI), Mahasiswa Program Studi DIII Teknologi Laboratorium Medis Fakultas Ilmu Kesehatan Universitas Muhammadiyah Surabaya Tahun Akademik 2022/2023, atas nama mahasiswa :

Nama : **NURIS SHAFARA PRIMASWARI**  
NIM : 20200662042  
Judul KTI : **Gambaran Hasil Pemeriksaan IgG dan IgM Pada Pasien Demam Berdarah Dengue di RSUD Haji Surabaya**

Bermaksud untuk melakukan penelitian selama 1 bulan yang akan dimulai sejak tanggal 30 Maret 2023 s/d 30 April 2023 di Rumah Sakit Umum Daerah Haji Surabaya. Sehubungan dengan hal tersebut kami mohon dengan hormat agar Bapak/Ibu berkenan memberikan ijin yang dimaksud. Demikian atas perhatian dan kerjasamanya yang baik kami sampaikan terima kasih.

*Wassalamu'alaikum Wr. Wb.*

Surabaya, 13 Maret 2023  
Wakil Dekan I,  
  
**Dr. Supatmi, S.Kep., Ns., M.Kes**  
NIK : 012.05.1.1973.97.018

Tembusan :  
1. Kabid. Diklat  
2. Ka. Laboratorium Patologi Klinik RSUD Haji Surabaya

Morality, intellectuality and Entrepreneurship  
FAKULTAS AGAMA ISLAM | FAKULTAS KEHIMPUNAN DAN SAINS PENDIDIKAN | FAKULTAS TEKNIK  
FAKULTAS FISIKA DAN MIPA | FAKULTAS HUKUM | FAKULTAS ILMU KESEHATAN  
FAKULTAS PSIKOLOGI | FAKULTAS KEDOKTERAN | PROGRAM PASCASARJANA

ADDRESS  
Jl. Satrio No. 59 Kota Surabaya  
Telp: (031) 8413000-00111  
www.um-surabaya.ac.id

CONTACT  
phone : 031-8413000  
fax : 031-8413000  
email : info@um-surabaya.ac.id

## Lampiran 1.2 Surat Persetujuan Penelitian dari RSUD Haji Surabaya

### PEMERINTAH PROVINSI JAWA TIMUR RUMAH SAKIT UMUM DAERAH HAJI BIDANG PENDIDIKAN DAN PENELITIAN

#### NOTA DINAS

Kepada : Yth. Ka. Pathologi Klinik  
Dari : Kepala Bidang Diklit  
Tanggal : 12 April 2023  
Nomor : 445-47/304/2023  
Lampiran : -  
Perihal : Penghadapan Mahasiswa Penelitian

*Assalamu'alaikum Wr. Wb.*

Berdasarkan permohonan ijin Penelitian yang telah disetujui oleh Ka. Instalasi Pathologi Klinik, bersama ini kami hadapkan mahasiswa,

Nama : NURIS SHAFARA PRIMASWARI  
NIM : 20201660001  
Institusi : Fakultas Ilmu Kesehatan Universitas Muhammadiyah Surabaya  
Judul : Gambaran Hasil Pemeriksaan IgG dan IgM pada Pasien Demam Berdarah Dengue Di RSUD Haji Propinsi Jawa Timur.

Untuk melaksanakan penelitian di unit kerja Saudara dalam rangka penyusunan karya tulis ilmiah, terhitung mulai tanggal 12 April 2023 sampai dengan 12 Mei 2023. Untuk kebenaran data serta memantau pelaksanaan penelitian oleh peneliti tersebut, dimohon memberikan tanda tangan pada lembar monitoring bagi pemberi data dan pembimbing di unit kerja.

Demikian atas perhatian dan kerjasama yang baik, disampaikan terima kasih.

*Wassalamu'alaikum Wr. Wb.*

Ka. Bidang Diklit

dr. RACHMAD CAHYADIM Kes  
Pembina  
NIP. 19801225 200604 1 011

Tembusan :  
Yth. Ka Instalasi Rekam Medik

## Lampiran 1.3 Surat Selesai Penelitian dari RSUD Haji Surabaya



### PEMERINTAH PROVINSI JAWA TIMUR

#### RUMAH SAKIT UMUM HAJI SURABAYA

e-mail: rsuhajisby1@yahoo.com Telp. (031) 5924000 Fax 5947890  
Jalan Manyar Kertoadi Surabaya 60117

#### SURAT KETERANGAN

No. 445 / SL.A / 304 / 2023

Yang bertanda tangan di bawah ini,

Nama : dr. Rachmad Cahyadi, M.Kes  
NIP : 19801225 200604 1 011  
Pangkat/Golongan : Pembina / IV-a  
Jabatan : Ka. Bidang Diklit RSU Haji Surabaya

Dengan ini menerangkan bahwa :

Nama : **Nuris Shafara Primaswari**  
NIM : 20200662042  
Institusi : Prodi DIII Teknologi Laboratorium Medis Universitas Muhammadiyah Surabaya.  
Judul : Gambaran Hasil Pemeriksaan Igg dan IgM pada Pasien Demam Berdarah Dengue di RSUD Haji Provinsi Jawa Timur

Telah selesai melaksanakan pengambilan data di Instansi Pathologi Klinik pada tanggal 12 April 2023 s.d 12 Mei 2023.

Demikian surat keterangan ini dibuat untuk dipergunakan sebagaimana mestinya.

Surabaya, 21 Mei 2023  
pada Bidang Diklit

**dr. Rachmad Cahyadi, M.Kes**  
NIP. 19801225 200604 1 011

## Lampiran 1.4 Data Sekunder Hasil Pemeriksaan IgG dan IgM Dengue



**PEMERINTAH PROVINSI JAWA TIMUR**  
**RUMAH SAKIT UMUM DAERAH HAJI**  
e-mail: rshaji@jatimprov.go.id Telp. (031) 5924000 Fax. 031 - 5947890  
Jalan Manyar Kertoadi Surabaya 60117

Data Hasil Pemeriksaan IgG dan IgM Dengue pada Pasien Demam Berdarah Dengue Di RSUD Haji Provinsi Jawa Timur.

Tanggal Pemeriksaan : 12 April – 12 Mei 2023  
Peneliti : Nuris Shafara Primaswari  
Judul Penelitian : Gambaran Hasil Pemeriksaan IgG Dan IgM Pada Pasien Demam Berdarah Dengue Di RSUD Haji Surabaya

No	Kode Sampel	Jenis Kelamin (P/L)	Usia (Tahun)	Hasil Pemeriksaan	
				IgG	IgM
1	A04	P	40	+	+
2	A16	L	14	+	+
3	A20	P	23	+	+
4	A22	L	15	+	-
5	A23	P	8	-	+
6	A25	L	18	+	+
7	A27	P	9	+	-
8	A32	P	23	+	+
9	A34	L	58	+	+
10	A37	L	36	+	-
11	A41	L	48	-	-
12	A42	L	4	+	+
13	A47	P	6	+	+
14	A50	P	14	+	-
15	A66	L	15	+	-
16	A67	L	14	-	+
17	A69	L	40	+	+
18	A70	L	18	+	-
19	A87	L	28	-	-
20	A92	P	53	+	-
21	A93	L	23	+	+
22	A95	L	19	+	+
23	A98	L	51	+	+
24	A100	L	25	-	-
25	A101	L	17	+	+
26	A102	L	28	-	-
27	A105	L	36	-	+

No	Kode Sampel	Jenis Kelamin (P/L)	Usia (Tahun)	Hasil Pemeriksaan	
				IgG	IgM
28	A106	L	33	+	-
29	A109	L	33	+	-
30	A110	L	55	-	-
31	A112	L	36	+	-
32	A116	P	7	+	+
33	A119	L	8	+	-
34	A120	L	14	-	+
35	A121	L	14	+	-
36	A122	L	25	+	-
37	A123	P	34	+	-
38	A124	L	15	+	-
39	A125	L	16	+	-
40	A129	P	21	+	-
41	A130	L	11	+	-
42	A132	L	15	+	+
43	A134	L	34	-	-
44	A141	L	12	+	-
45	A143	L	6	+	+
46	A146	P	12	+	-
47	A151	L	8	+	-
48	A152	P	28	-	-
49	A153	P	30	+	-
50	A156	L	34	+	-
51	A157	L	17	+	-
52	A159	P	61	+	-
53	A161	L	12	-	+
54	A162	P	19	+	-
55	A165	L	13	+	-
56	A166	P	14	+	-
57	A172	L	28	+	-
58	A174	L	14	+	-
59	A175	P	30	+	-
60	A176	P	44	+	-
61	A177	L	29	+	+
62	A179	L	21	+	-
63	A181	L	14	-	-
64	A182	L	11	-	+
65	A183	P	5	+	-
66	A184	L	30	+	+
67	A185	P	50	-	-
68	A187	P	27	+	-
69	A191	L	18	+	-

No	Kode Sampel	Jenis Kelamin (P/L)	Usia (Tahun)	Hasil Pemeriksaan	
				IgG	IgM
70	A192	L	19	+	-
71	A194	L	22	+	-
72	A195	L	40	+	-
73	A197	L	0	-	-
74	A200	P	16	-	+
75	A201	P	27	+	-
76	A203	P	15	+	-
77	A205	P	44	+	-
78	A207	P	26	+	+
79	A209	P	12	+	-
80	A210	P	17	+	-
81	A215	P	12	+	-
82	A217	L	4	-	+
83	A218	P	16	+	-
84	A222	P	10	+	-
85	A227	P	74	+	-
86	A229	L	11	+	-
87	A230	L	25	+	-
88	A232	L	6	-	+
89	A236	L	15	+	-
90	A241	P	22	+	-
91	A242	L	7	+	-
92	A243	L	20	+	-
93	A244	P	25	+	-
94	A247	L	29	+	-
95	A248	P	27	+	-
96	A252	L	20	-	-
97	A254	L	68	+	-
98	A256	L	18	+	-
99	A260	P	19	+	-
100	A261	L	13	+	-
101	A262	L	6	-	+
102	A266	L	21	+	-
103	A267	P	28	+	-
104	A268	L	21	+	-
105	A270	P	6	+	-
106	A275	L	68	+	-
107	A276	L	29	+	-
108	A278	P	23	+	+
109	A279	L	25	+	-
110	A283	L	25	+	-
111	A284	P	22	-	-

No	Kode Sampel	Jenis Kelamin (P/L)	Usia (Tahun)	Hasil Pemeriksaan	
				IgG	IgM
112	A285	P	13	-	-
113	A289	P	36	+	-
114	A290	L	23	+	-
115	A293	L	14	+	+
116	A295	L	14	+	-
117	A297	L	14	+	-
118	A298	L	14	+	-
119	A299	P	0	-	-
120	A300	L	32	+	-
121	A307	P	28	+	-
122	A314	P	20	+	-
123	A317	L	32	-	+
124	A318	L	22	+	-
125	A319	L	50	-	-
126	A320	P	37	+	-
127	A321	L	25	+	-
128	A322	P	25	+	-
129	A328	L	22	+	-
130	A333	P	21	+	+
131	A335	L	7	+	-
132	A337	L	46	+	-
133	A338	L	14	+	-
134	A339	P	22	-	+
135	A342	P	37	+	-
136	A345	P	38	+	-
137	A346	L	18	+	-
138	A348	L	14	+	+
139	A349	L	13	+	-
140	A351	L	16	+	-
141	A352	L	21	+	-
142	A364	L	19	+	+
143	A365	P	55	-	-
144	A367	L	13	+	+
145	A369	P	13	-	+
146	A370	L	27	-	+
147	A374	L	20	+	+
148	A380	P	23	+	-
149	A381	L	14	+	-
150	A382	L	9	-	-
151	A383	P	13	+	-
152	A384	P	21	-	-
153	A385	L	21	-	-

No	Kode Sampel	Jenis Kelamin (P/L)	Usia (Tahun)	Hasil Pemeriksaan	
				IgG	IgM
154	A386	L	22	+	-
155	A387	L	28	+	-
156	A390	L	32	-	-
157	A392	P	24	+	-
158	A394	L	15	+	-
159	A397	P	15	-	+
160	A399	L	48	+	+
161	A405	L	14	+	-
162	A406	P	21	+	-
163	A407	L	20	+	-
164	A408	L	32	+	-
165	A409	L	35	+	-
166	A411	P	34	+	-
167	A415	P	32	-	-
168	A416	P	22	+	-
169	A426	P	25	-	-
170	A442	P	21	+	-

Surabaya, 06 Juli 2023  
Pranata Laboratorium Patologi Klinik  
Pendamping Penelitian




Benita Wijiastuti, A.Md. A.K  
NIP.197406061995032002

Form/059.RM/RSH/1994-00☆☆☆



### Lampiran 1.5 Kartu Bimbingan




**PROGRAM STUDI D3 ANALIS KESEHATAN  
FAKULTAS ILMU KESEHATAN  
UNIVERSITAS MUHAMMADIYAH SURABAYA**


**KARTU BIMBINGAN KTI**

**NAMA** Nuris Shafara Primaswari  
**NIM/NPM** 20200662042  
**JUDUL KTI** Gambaran Hasil Pemeriksaan IgG dan IgM Pada Pasien Demam Berdarah Dengue di RSUD Haji Surabaya

**DOSEN PEMBIMBING** 1) Fitrotin Azizah, S.ST, M.Si  
 2) Nur Vita Purwaningsih, S.ST, M.Kes.



NO	Tgl/Bln/Thn	MATERI BIMBINGAN	PARAF		
			Mhs	PEMBIMBING	
				I	II
1.	14/12/22	Pengajuan judul KTI	<i>[Signature]</i>	<i>[Signature]</i>	
2.	18/12/22	Pengajuan judul KTI	<i>[Signature]</i>		<i>[Signature]</i>
3.	22/12/22	Pengajuan Matriks	<i>[Signature]</i>	<i>[Signature]</i>	
4.	27/12/22	Pengajuan Matriks	<i>[Signature]</i>		<i>[Signature]</i>
5.	06/01/23	Pengajuan Bab 1 & Revisi Matriks	<i>[Signature]</i>	<i>[Signature]</i>	
6.	10/01/23	Pengajuan Bab 1 & Revisi Matriks	<i>[Signature]</i>		<i>[Signature]</i>
7.	14/01/23	Rev Bab 1 & pengajuan Bab 3	<i>[Signature]</i>	<i>[Signature]</i>	
8.	17/01/23	Rev Bab 1 & pengajuan Bab 3	<i>[Signature]</i>		<i>[Signature]</i>
9.	23/02/23	ACC Bab 1 & Rev Bab 3	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
10.	01/03/23	ACC Bab 3 & pengajuan Bab 2	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
11.	29/03/23	Rev Bab 2	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
12.	18/04/23	ACC Bab 2	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
13.	05/06/23	Pengajuan Bab 4	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
14.	20/06/23	Rev Bab 4 & pengajuan Bab 5 & 6	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
15.	22/06/23	ACC Bab 4 & Rev Bab 5 & 6	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
16.	23/06/23	ACC Bab 5 & Bab 6	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
17.	09/07/23	Abstrak	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
18.	05/07/23	Abstrak	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
19.	06/07/23	Revisi Abstrak & ACC Abstrak	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
20.					
21.					
22.					

Ketua Program Studi  
  
 Fitrotin Azizah, S.ST, M.Si

# Lampiran 1.6 SOP ICT Anti Dengue

## Rapid Dengue IgG/IgM Combo Test Card

Catalog Number: 1N04C2

A Rapid Qualitative Immunochromatographic Test for the Simultaneous Detection of IgG and IgM Antibodies to Dengue Virus in Human Whole Blood, Serum or Plasma

### INTENDED USE

Rapid Dengue IgG/IgM Combo Test Card is a rapid immunochromatographic assay for the simultaneous detection of IgG and IgM antibodies to Dengue virus in human whole blood, serum or plasma. The assay is used as a screening test for Dengue viral infection and as an aid for differential diagnosis of primary and secondary infections in conjunction with other criteria.

### INTRODUCTION

Dengue fever is one of the most important mosquito-borne diseases in the world in terms of morbidity, mortality. Dengue fever virus (serotypes 1 – 4) belongs to the group flavivirus, and is transmitted in nature by day-biting Aedes mosquitoes. The most important mosquito vector is highly domesticated and urban species, Aedes aegypti. Primary Dengue infection, also known as Dengue Fever, is the most common type of dengue illness. It is associated with mild to high fever, headache, muscle pain and skin rash. Secondary infection is known as Dengue Hemorrhagic Fever (DHF) or Dengue Shock Syndrome, and often results in high fever and in many cases, with hemorrhagic events and circulatory failure. The fatality rate in patients with Dengue Shock Syndrome can be as high as 44%. Dengue presents typically as a fever of sudden onset with headache, retrobulbar pain, pain in the back and limbs (break-bone fever), lymphadenopathy and maculopapular rash. Patients diagnosed with dengue in endemic areas generally have secondary infection, whereas patients in non-endemic areas are usually diagnosed with primary infection. Specific antibody responses to Dengue virus enable serodiagnosis and differentiation between primary and secondary dengue infections.

Rapid Dengue IgG/IgM Combo Test Card is a new generation rapid Immuno-chromatographic test using recombinant dengue viral antigens of all four serotypes to detect specific antibody response.

### TEST PRINCIPLE

Rapid Dengue IgG/IgM Combo Test Card utilizes the principle of Immuno-chromatography. Mouse anti-human IgM and human IgG antibodies are immobilized on the nitrocellulose membrane respectively, as two individual test lines (IgM line and IgG line) in the test window of the test device. The IgG line in the test window is closer to the sample well and followed by IgM line. As the test sample flows through the membrane within the test device, the colored-Dengue specific recombinant antigen-colloidal gold conjugate complexes with specific antibodies (IgM and/or IgG) of Dengue virus, if present in the sample. This complex moves further on the membrane to the test region where it is captured by the anti-human IgM and/or human IgG antibodies coated on the membrane leading to formation of a colored band, which indicates a positive test result. Absence of this colored band in the test window indicates a negative test result. A built-in control line will always appear in the test window when the test has performed properly, regardless of the presence or absence of anti-Dengue virus antibodies in the specimen.

### REAGENTS AND MATERIALS SUPPLIED

- Each kit contains:
1. Rapid Dengue IgG/IgM Combo Test Card in foil pouch
  2. Sample Buffer
  3. 2 µL Capillary Pipet
  4. Instructions for Use

### MATERIALS NOT PROVIDED

1. Specimen collection container
2. Timer

### STORAGE AND STABILITY

The sealed pouches in the test kit may be stored between 4-30°C for the duration of the shelf life as indicated on the pouch.

### PRECAUTIONS


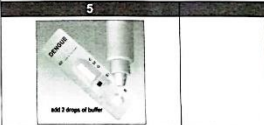
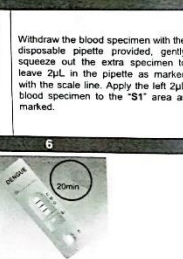
1. This kit is for *IN VITRO* diagnostic use only.
2. This kit is for **PROFESSIONAL** use only.

3. Read the instructions carefully before performing the test.
4. This product does not contain any human source materials.
5. Do not use kit contents after the expiration date.
6. Handle all specimens as potentially infectious.
7. Follow standard Lab procedure and biosafety guidelines for handling and disposal of potentially infective material. When the assay procedure is completed, dispose specimens after autoclaving them at 121°C for at least 20 min. Alternatively, they can be treated with 0.5% Sodium Hypochlorite for 1-2 hours before disposal.
8. Do not pipette reagent by mouth and no smoking or eating while performing assays.
9. Wear gloves during the whole procedure.

### SPECIMEN COLLECTION AND PREPARATION

1. No prior special preparation of the patient is required before sample collection by approved techniques.
2. The test works best on fresh whole blood / serum / plasma samples. If testing cannot be performed immediately, serum / plasma may be stored at 2-8°C up to 3 days in case of delay in testing. For long-term storage, serum / plasma specimens can be frozen at -20°C for 3 months or -70°C for longer period. Blood samples collected with a suitable anticoagulant such as EDTA or Heparin or Oxalate may be stored at 2-8°C up to 3 days. Blood samples should not be frozen.
3. Repeated freezing and thawing of the specimen should be avoided.
4. Do not use haemolysed, clotted, contaminated, lipemic and viscous/turbid specimen.
5. Specimen containing precipitates or particulate matter must be centrifuged and the clear supernatant only used for testing.
6. Do not inactivate the sample by heating.
7. Shipment of specimens should comply with local regulations for transportation of etiologic agents.

### PROCEDURE

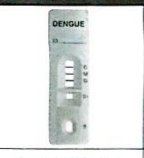


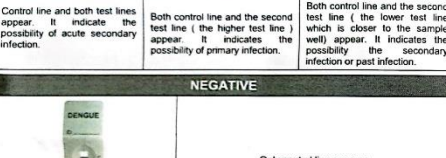
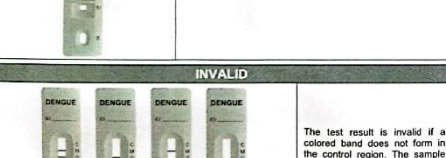
1	Bring the kit components to room temperature before testing.
2	Open the pouch and remove the Card. Once opened, the test card must be used immediately.
3	Label the test card with patient identity.
4	 <p>Withdraw the blood specimen with the disposable pipette provided, gently squeeze out the extra specimen to leave 2µL in the pipette as marked with the scale line. Apply the left 2µL blood specimen to the "S1" area as marked.</p>
5	 <p>Add 2 drops of sample buffer (approximately 80-100µL) to well marked as "S".</p>
6	 <p>At the end of 20 minutes read the results. A strong positive sample may show result earlier. <b>Note: Result after 20 minutes may not be accurate.</b></p>

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CS Dipindai dengan CamScanner

### INTERPRETATION OF RESULTS

POSITIVE		
 <p>Both IgG/IgM Positive</p>	 <p>IgM Positive IgG Negative</p>	 <p>IgM Negative IgG Positive</p>
Control line and both test lines appear. It indicates the possibility of acute secondary infection.	Both control line and the second test line (the higher test line) appear. It indicates the possibility of primary infection.	Both control line and the second test line (the lower test line which is closer to the sample well) appear. It indicates the secondary infection or past infection.
NEGATIVE		
 <p>Only control line appears.</p>		
INVALID		
 <p>The test result is invalid if a colored band does not form in the control region. The sample must be re-tested, using a new test device.</p>		

### QUALITY CONTROL

1. The control band is an internal reagent and procedural control. It will appear if the test has been performed correctly and the reagents are reactive.
2. Good Laboratory Practice recommends the daily use of control materials to validate the reliability of the device. Control materials which is not provided with this test kit may be commercially available.

### LIMITATIONS

1. The test is for qualitative detection of anti-Dengue antibody in human serum, plasma or blood sample and does not indicate the quantity of the antibodies.
2. The test is for *in vitro* diagnostic use only.
3. As in case of all diagnostic tests, a definitive clinical diagnosis should not be based on the result of a single test but should rather be made after all the clinical findings have been evaluated.

### PERFORMANCE CHARACTERISTICS

#### 1. Accuracy

In clinical evaluations of the performance of Rapid Dengue IgG/IgM Combo Test Card, 1041 confirmed samples were tested. For IgM, a sensitivity of 95.8% (249/260) and a specificity of 98.7% (771/781) were obtained. For IgG, a sensitivity of 92.1% (128/139) and a specificity of 98.6% (889/902) were obtained. Overall, agreement with the Predicate Test is 98.0% for IgM, 97.7% for IgG.

Rapid Dengue IgG/IgM Combo Test Card	Predicate Test		
	IgM Positive	IgM Negative	IgM Agreement
IgM Positive	249	10	
IgM Negative	11	771	
	95.8%	98.7%	

Rapid Dengue IgG/IgM Combo Test Card	Predicate Test		
	IgG Positive	IgG Negative	IgG Agreement
IgG Positive	128	13	
IgG Negative	11	889	
	92.1%	98.6%	

#### 2. Interference

No interference was found with bilirubin (10 mg/dL), hemoglobin (18mg/dL) or triglycerides (600 mg/dL) on the sensitivity and specificity of the test.

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**Lampiran 1.7** Perhitungan Persentase Hasil Pemeriksaan IgG dan IgM Pada Pasien DBD.

- a. Perhitungan persentase hasil pemeriksaan IgG positif dan IgM positif DBD

$$\text{Persentase} = \frac{\text{Jumlah hasil pemeriksaan}}{\text{Jumlah seluruh data sampel}} \times 100\%$$

$$\text{Persentase} = \frac{27}{170} \times 100\%$$

$$\text{Persentase} = 15,88\% = 16\%$$

- b. Perhitungan persentase hasil pemeriksaan IgG negatif dan IgM negatif DBD

$$\text{Persentase} = \frac{\text{Jumlah hasil pemeriksaan}}{\text{Jumlah seluruh data sampel}} \times 100\%$$

$$\text{Persentase} = \frac{22}{170} \times 100\%$$

$$\text{Persentase} = 12,94\% = 13\%$$

- c. Perhitungan persentase hasil pemeriksaan IgG positif dan IgM negatif DBD

$$\text{Persentase} = \frac{\text{Jumlah hasil pemeriksaan}}{\text{Jumlah seluruh data sampel}} \times 100\%$$

$$\text{Persentase} = \frac{106}{170} \times 100\%$$

$$\text{Persentase} = 62,35\% = 62\%$$

- d. Perhitungan persentase hasil pemeriksaan IgG negatif dan IgM positif DBD

$$\text{Persentase} = \frac{\text{Jumlah hasil pemeriksaan}}{\text{Jumlah seluruh data sampel}} \times 100\%$$

$$\text{Persentase} = \frac{15}{170} \times 100\%$$

$$\text{Persentase} = 8,82\% = 9\%$$

**Lampiran 1.8** Perhitungan Persentase Hasil Pemeriksaan IgG dan IgM DBD Berdasarkan Jenis Kelamin.

- a. Perhitungan persentase hasil pemeriksaan IgG positif dan IgM positif DBD pada jenis kelamin perempuan.

$$\text{Persentase} = \frac{\text{Jumlah hasil pemeriksaan}}{\text{Jumlah seluruh data sampel}} \times 100\%$$

$$\text{Persentase} = \frac{8}{170} \times 100\%$$

$$\text{Persentase} = 4,70\% = 5\%$$

- b. Perhitungan persentase hasil pemeriksaan IgG positif dan IgM positif DBD pada jenis kelamin Laki-laki.

$$\text{Persentase} = \frac{\text{Jumlah hasil pemeriksaan}}{\text{Jumlah seluruh data sampel}} \times 100\%$$

$$\text{Persentase} = \frac{19}{170} \times 100\%$$

$$\text{Persentase} = 11,17\% = 11\%$$

- c. Perhitungan persentase hasil pemeriksaan IgG negatif dan IgM negatif DBD pada jenis kelamin Perempuan.

$$\text{Persentase} = \frac{\text{Jumlah hasil pemeriksaan}}{\text{Jumlah seluruh data sampel}} \times 100\%$$

$$\text{Persentase} = \frac{9}{170} \times 100\%$$

$$\text{Persentase} = 5,29\% = 5\%$$

- d. Perhitungan persentase hasil pemeriksaan IgG negatif dan IgM negatif DBD pada jenis kelamin Laki-laki.

$$\text{Persentase} = \frac{\text{Jumlah hasil pemeriksaan}}{\text{Jumlah seluruh data sampel}} \times 100\%$$

$$\text{Persentase} = \frac{13}{170} \times 100\%$$

$$\text{Persentase} = 7,64\% = 8\%$$

- e. Perhitungan persentase hasil pemeriksaan IgG positif dan IgM negatif DBD pada jenis kelamin Perempuan.

$$\text{Persentase} = \frac{\text{Jumlah hasil pemeriksaan}}{\text{Jumlah seluruh data sampel}} \times 100\%$$

$$\text{Persentase} = \frac{43}{170} \times 100\%$$

$$\text{Persentase} = 25,29\% = 25\%$$

- f. Perhitungan persentase hasil pemeriksaan IgG positif dan IgM negatif DBD pada jenis kelamin Laki-laki.

$$\text{Persentase} = \frac{\text{Jumlah hasil pemeriksaan}}{\text{Jumlah seluruh data sampel}} \times 100\%$$

$$\text{Persentase} = \frac{63}{170} \times 100\%$$

$$\text{Persentase} = 37,05\% = 37\%$$

- g. Perhitungan persentase hasil pemeriksaan IgG negatif dan IgM positif DBD pada jenis kelamin Perempuan.

$$\text{Persentase} = \frac{\text{Jumlah hasil pemeriksaan}}{\text{Jumlah seluruh data sampel}} \times 100\%$$

$$\text{Persentase} = \frac{5}{170} \times 100\%$$

$$\text{Persentase} = 2,94\% = 3\%$$

- h. Perhitungan persentase hasil pemeriksaan IgG negatif dan IgM positif DBD pada jenis kelamin Perempuan.

$$\text{Persentase} = \frac{\text{Jumlah hasil pemeriksaan}}{\text{Jumlah seluruh data sampel}} \times 100\%$$

$$\text{Persentase} = \frac{10}{170} \times 100\%$$

$$\text{Persentase} = 5,88\% = 6\%$$

**Lampiran 1.9** Perhitungan Persentase Hasil Pemeriksaan IgG dan IgM DBD Berdasarkan Usia.

- a. Perhitungan persentase hasil pemeriksaan IgG dan IgM DBD Berdasarkan Usia 0-14 tahun.

$$\text{Persentase} = \frac{\text{Jumlah hasil pemeriksaan}}{\text{Jumlah seluruh data sampel}} \times 100\%$$

$$\text{Persentase} = \frac{50}{170} \times 100\%$$

$$\text{Persentase} = 29,4\% = 29\%$$

- a. Perhitungan persentase hasil pemeriksaan IgG dan IgM DBD Berdasarkan Usia 15-24 tahun.

$$\text{Persentase} = \frac{\text{Jumlah hasil pemeriksaan}}{\text{Jumlah seluruh data sampel}} \times 100\%$$

$$\text{Persentase} = \frac{55}{170} \times 100\%$$

$$\text{Persentase} = 32,35\% = 32\%$$

- b. Perhitungan persentase hasil pemeriksaan IgG dan IgM DBD Berdasarkan Usia 25-34 tahun.

$$\text{Persentase} = \frac{\text{Jumlah hasil pemeriksaan}}{\text{Jumlah seluruh data sampel}} \times 100\%$$

$$\text{Persentase} = \frac{38}{170} \times 100\%$$

$$\text{Persentase} = 22,35\% = 22\%$$

- c. Perhitungan persentase hasil pemeriksaan IgG dan IgM DBD Berdasarkan Usia 35-44 tahun.

$$\text{Persentase} = \frac{\text{Jumlah hasil pemeriksaan}}{\text{Jumlah seluruh data sampel}} \times 100\%$$

$$\text{Persentase} = \frac{13}{170} \times 100\%$$

$$\text{Persentase} = 7,64\% = 8\%$$

- d. Perhitungan persentase hasil pemeriksaan IgG dan IgM DBD Berdasarkan Usia 45-54 tahun.

$$\text{Persentase} = \frac{\text{Jumlah hasil pemeriksaan}}{\text{Jumlah seluruh data sampel}} \times 100\%$$

$$\text{Persentase} = \frac{8}{170} \times 100\%$$

$$\text{Persentase} = 4,70\% = 5\%$$

- e. Perhitungan persentase hasil pemeriksaan IgG dan IgM DBD Berdasarkan Usia 55-64 tahun.

$$\text{Persentase} = \frac{\text{Jumlah hasil pemeriksaan}}{\text{Jumlah seluruh data sampel}} \times 100\%$$

$$\text{Persentase} = \frac{3}{170} \times 100\%$$

$$\text{Persentase} = 1,76\% = 2\%$$

- f. Perhitungan persentase hasil pemeriksaan IgG dan IgM DBD Berdasarkan Usia 65-74 tahun.

$$\text{Persentase} = \frac{\text{Jumlah hasil pemeriksaan}}{\text{Jumlah seluruh data sampel}} \times 100\%$$

$$\text{Persentase} = \frac{3}{170} \times 100\%$$

$$\text{Persentase} = 1,76\% = 2\%$$





**ENDORSEMENT LETTER**

837/PB-UMS/EL/VIII/2023


This letter is to certify that the abstract of the thesis below

Title : Result Description of IgG and IgM Examination on Dengue Hemorrhagic Fever Patients at RSUD Haji of Surabaya  
Student's name : Nuris Shafara Primaswari  
Student's ID Number : 20200662042  
Department : Medical Laboratory Technology, Diploma-III, Faculty of Health and Sciences, Universitas Muhammadiyah Surabaya Indonesia

has been endorsed by Pusat Bahasa *UMSurabaya* for further approval by the examining committee of the faculty.

Surabaya, August 17, 2023

Chair person,



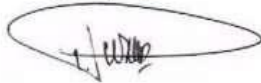
Dr. Waode Hamsia, M.Pd

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Naskah tugas akhir / skripsi / karya tulis / tesis\*) yang diserahkan atas :

N a m a : Nuris Shafara Primaswari  
N I M : 20200662042  
Fakultas/Prodi : Fakultas Ilmu Kesehatan (D3) Ahli Teknologi Laboratorium Medis  
Alamat : Dsn. Mancilan, RT.004/RW.001, Desa.Mancilan, Kecamatan.Mojoagung,  
Kabupaten.Jombang, Jawa Timur  
Judul : Gambaran Hasil Pemeriksaan IgG dan IgM Pada Pasien Demam  
Berdarah Dengue di RSUD Haji Surabaya  
telah **diserahkan dan memenuhi kriteria** batas maksimal yang sudah ditentukan.

Petugas perpustakaan



Putri Rokhmawati

Surabaya, 22 Agustus 2023

Mahasiswa,



Nuris Shafara Primaswari

Mengetahui,  
Kepala Perpustakaan  
  
Drs. Yarno, M.Pd.

**\*) DILARANG KERAS MENYEBARLUASKAN FORM INI**

**SURAT KETERANGAN BEBAS PINJAM**

Dengan ini menyatakan bahwa :

Nama : Nuris Shafara Primaswari

NIM : 20200662042

Program Studi/Fakultas : (D3) Ahli Teknologi Laboratorium Medis/Fakultas Ilmu Kesehatan

Alamat : Dsn. Mancilan, RT.004/RW.001, Desa.Mancilan,  
Kecamatan.Mojoagung, Kabupaten.Jombang, Jawa Timur

No.Telp/HP : 081357383031

Tidak memiliki pinjaman bahan pustaka di Perpustakaan Universitas Muhammadiyah Surabaya.  
Surat keterangan ini digunakan untuk: **Mengambil Ijazah**

Mengetahui,  
Kepala Perpustakaan



Drs. Yarno, M.Pd.

Surabaya, 24 Agustus 2023  
Petugas Perpustakaan



Dyah Ayu S.