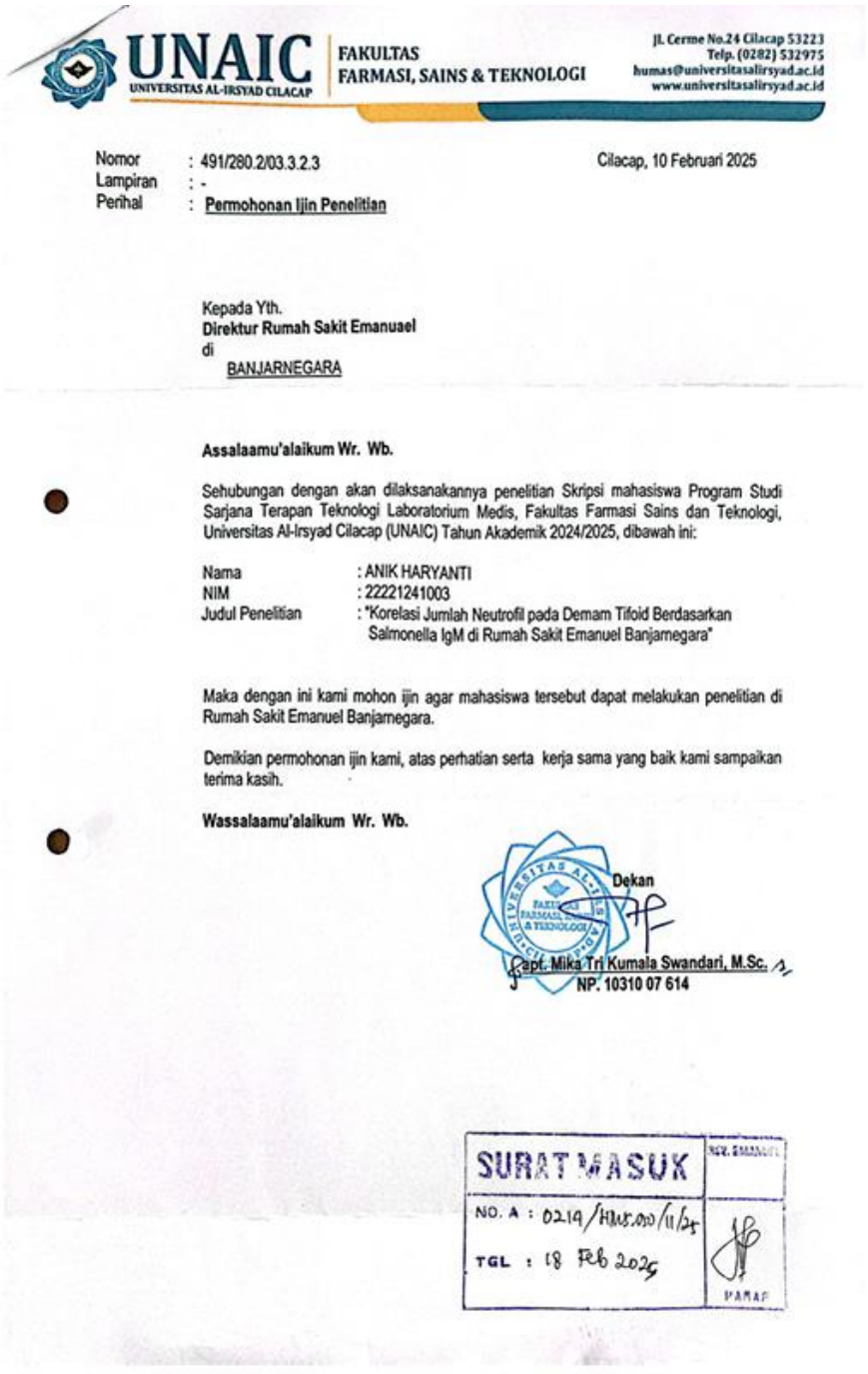
LAMPIRAN

Lampiran 1. Surat Izin Pengambilan Data



UNAIC
UNIVERSITAS AL-IRSYAD CILACAP
FAKULTAS
FARMASI, SAINS & TEKNOLOGI

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Nomor : 491/280.2/03.3.2.3
Lampiran : -
Perihal : Permohonan Ijin Penelitian

Cilacap, 10 Februari 2025

Kepada Yth.
Direktur Rumah Sakit Emanuael
di
BANJARNEGARA

Assalaamu'alaikum Wr. Wb.

Sehubungan dengan akan dilaksanakannya penelitian Skripsi mahasiswa Program Studi Sarjana Terapan Teknologi Laboratorium Medis, Fakultas Farmasi Sains dan Teknologi, Universitas Al-Irsyad Cilacap (UNAIC) Tahun Akademik 2024/2025, dibawah ini:

Nama : ANIK HARYANTI
NIM : 22221241003
Judul Penelitian : "Korelasi Jumlah Neutrofil pada Demam Tifoid Berdasarkan Salmonella IgM di Rumah Sakit Emanuel Banjarnegara"

Maka dengan ini kami mohon ijin agar mahasiswa tersebut dapat melakukan penelitian di Rumah Sakit Emanuel Banjarnegara.

Demikian permohonan ijin kami, atas perhatian serta kerja sama yang baik kami sampaikan terima kasih.

Wassalaamu'alaikum Wr. Wb.

Dekan

Apt. Mika Tri Kumala Swandari, M.Sc.
NP. 10310 07 614

SURAT MASUK
NO. A : 0219/H13.00/II/25
TGL : 18 Feb 2025
PARAF

RUMAH SAKIT EMANUEL
Emanuel Hospital

Nomor : 0290/ RSE/HMS.050/II/2025
Perihal : Tanggapan Ijin Penelitian

Purwareja Klampok, 18 Februari 2025

Yang Terhormat:
Dekan Fakultas Farmasi, Sains & Teknologi
Universitas Al-Irsyad Cilacap
Di
Cilacap

Disampaikan dengan hormat, menanggapi surat dengan nomor 491/280.2/03.3.2.3 perihal permohonan ijin penelitian atas diri :

Nama	: Anik Haryanti
NIM	: 22221241003
Judul Penelitian	: Korelasi Jumlah Neutrofil pada Demam Tifoid Berdasarkan Salmonela IgM di Rumah Sakit Emanuel Banjarnegara

maka disampaikan bahwa kami mengijinkan untuk melakukan penelitian di RS Emanuel dengan tetap menerapkan etika penelitian dan selanjutnya menyerahkan hasil penelitian.

Berkaitan dengan hal tersebut apabila ada hal-hal yang perlu dikoordinasikan dapat menghubungi Ibu Ns.Dwi Sudaryanti, S.Kep, M.Kep (Ketua Komkordik) di No HP: 081390020709

Demikian tanggapan dari kami,kiranya dapat menjadikan periksa. Atas perhatian dan kerjasama yang baik, diucapkan terima kasih.

Direktur,

dr. Tiurlan Pardamean BR Sibarani

JL. RAYA PURWAREJA KLAMPOK
BANJARNEGARA 53474

Lampiran 2. Data Pemeriksaan Pasien

no	no_rm	JK	Umur	IgG	IgM	Jumlah Neutrofil	Ket Neutrofil
1	xxxx7845	L	11	POSITIF	NEGATIF	3,7	NORMAL
2	xxxx0584	L	11	POSITIF	NEGATIF	3,94	NORMAL
3	xxxx3378	P	8	NEGATIF	POSITIF	8,34	TINGGI
4	xxxx1194	L	8	NEGATIF	POSITIF	9,9	TINGGI
5	xxxx8407	L	8	POSITIF	POSITIF	5,18	NORMAL
6	xxxx3888	P	8	POSITIF	POSITIF	12,85	TINGGI
7	xxxx8907	P	8	POSITIF	NEGATIF	3,3	NORMAL
8	xxxx4324	L	9	POSITIF	POSITIF	3,15	NORMAL
9	xxxx7797	L	6	NEGATIF	POSITIF	10,54	TINGGI
10	xxxx3549	P	7	POSITIF	POSITIF	5,36	NORMAL
11	xxxx6361	P	7	NEGATIF	POSITIF	8,03	TINGGI
12	xxxx8360	P	6	POSITIF	POSITIF	7,9	TINGGI
13	xxxx0869	P	7	POSITIF	POSITIF	2,58	NORMAL
14	xxxx0900	P	6	NEGATIF	POSITIF	9,42	TINGGI
15	xxxx1776	P	6	NEGATIF	POSITIF	14,01	TINGGI
16	xxxx3868	P	11	POSITIF	POSITIF	3,88	NORMAL
17	xxxx6550	L	6	POSITIF	POSITIF	9,21	TINGGI
18	xxxx7445	P	6	POSITIF	POSITIF	3,41	NORMAL
19	xxxx7661	L	5	NEGATIF	POSITIF	2,21	NORMAL
20	xxxx8762	P	7	POSITIF	NEGATIF	0,75	RENDAH
21	xxxx0287	P	6	POSITIF	POSITIF	18,75	TINGGI
22	xxxx3235	L	5	POSITIF	POSITIF	7,3	TINGGI
23	xxxx3595	L	5	POSITIF	POSITIF	2,41	NORMAL
24	xxxx2994	P	5	POSITIF	POSITIF	3	NORMAL
25	xxxx4745	P	5	POSITIF	POSITIF	4,58	NORMAL
26	xxxx4745	P	5	POSITIF	POSITIF	4,43	NORMAL
27	xxxx2420	L	5	POSITIF	POSITIF	8	TINGGI
28	xxxx7427	P	9	NEGATIF	POSITIF	16,74	TINGGI
29	xxxx2598	P	7	POSITIF	POSITIF	9,22	TINGGI
30	xxxx4866	P	9	NEGATIF	POSITIF	11,8	TINGGI
31	xxxx2771	L	6	POSITIF	POSITIF	4,2	NORMAL
32	xxxx4676	L	10	NEGATIF	POSITIF	2,94	NORMAL
33	xxxx5428	P	5	POSITIF	POSITIF	8,05	TINGGI
34	xxxx6208	L	6	NEGATIF	POSITIF	10,65	TINGGI
35	xxxx6760	P	7	POSITIF	NEGATIF	1,1	RENDAH
36	xxxx9629	L	5	POSITIF	POSITIF	7,8	TINGGI
37	xxxx9956	P	9	POSITIF	POSITIF	1,87	NORMAL
38	xxxx5487	P	9	POSITIF	POSITIF	2,58	NORMAL

Lampiran 3. Hasil Uji Statistik

Frequency Table

JENIS KELAMIN					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	LAKI-LAKI	15	39.5	39.5	39.5
	PEREMPUAN	23	60.5	60.5	100.0
	Total	38	100.0	100.0	

UMUR					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	5	9	23.7	23.7	23.7
	6	9	23.7	23.7	47.4
	7	6	15.8	15.8	63.2
	8	5	13.2	13.2	76.3
	9	5	13.2	13.2	89.5
	10	1	2.6	2.6	92.1
	11	3	7.9	7.9	100.0
	Total	38	100.0	100.0	

IgM					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NEGATIF	5	13.2	13.2	13.2
	POSITIF	33	86.8	86.8	100.0
	Total	38	100.0	100.0	

JUMLAH NEUTROFIL					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	RENDAH	2	5.3	5.3	5.3
	NORMAL	18	47.4	47.4	52.6
	TINGGI	18	47.4	47.4	100.0
	Total	38	100.0	100.0	

Tests of Normality						
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
IgM	.518	38	.000	.400	38	.000
JUMLAH NEUTROFIL	.307	38	.000	.737	38	.000
a. Lilliefors Significance Correction						

Nonparametric Correlations

Correlations				
			IgM	JUMLAH NEUTROFIL
Spearman's rho	IgM	Correlation Coefficient	1.000	.480**
		Sig. (2-tailed)	.	.002
		N	38	38
	JUMLAH NEUTROFIL	Correlation Coefficient	.480**	1.000
		Sig. (2-tailed)	.002	.
		N	38	38
**. Correlation is significant at the 0.01 level (2-tailed).				

Koefisien korelasi Spearman

Koefisien	Kekuatan Hubungan
0,00	Tidak ada hubungan
0,01 – 0,09	Hubungan kurang berarti
0,10 – 0,29	Hubungan lemah
0,30 – 0,49	Hubungan moderat
0,50 – 0,69	Hubungan kuat
0,70 – 0,89	Hubungan sangat kuat
>0,90	Hubungan mendekati sempurna

Lampiran 4. KIT *Cassette Rapid Test IgG/IgM Typhoid*

Typhoid IgG/IgM Rapid Test Cassette

INTENDED USE

The Typhoid IgG/IgM Rapid Test Cassette is a rapid, qualitative and differential test for the detection of IgG and IgM antibodies to *Salmonella typhi* (*S. typhi*) and paratyphi in human serum or plasma. It is for in vitro diagnostic use only and is intended as an aid in the earlier diagnosis of infection with *S. typhi* and paratyphi. The results obtained should not be the sole determinant for clinical decision. All positive specimens must be confirmed with other confirmatory methods.

INTRODUCTION

Typhoid fever and paratyphi fever are bacterial infections caused by *Salmonella Typhi* and paratyphoid *A, B, C* respectively, which is transmitted through the ingestion of tainted food and water. World-wide an estimated 17 million cases and 600,000 associated deaths occur annually[1]. Patients who are infected with HIV are at significantly increased risk of clinical infection. 1-5% of patients become chronic carriers harboring *S. typhi* in the gallbladder[2].
The clinical diagnosis of infections depends on isolation of *S. typhi* and paratyphi from blood, bone marrow or a specific anatomic lesion. In facilities that can not afford to perform this complicated and time-consuming procedure, File-Widal test is used to facilitate diagnosis. However, many limitations lead to difficulties in the interpretation of the Widal test[3].

PRINCIPLE

The Typhoid IgG/IgM Rapid Test Cassette is a lateral flow immunochromatographic assay. The test uses anti-human IgM antibody (test line IgM) , anti-human IgG (test line IgG) , and goat anti-rabbit IgG (control line C) immobilized on a nitrocellulose strip. The burgundy colored conjugate pad contains colloidal gold conjugated to recombinant H antigen and O antigen conjugated with colloidal gold (HO conjugates) and rabbit IgG-gold conjugates. When a specimen followed by assay buffer is added to the sample well , IgM &/or IgG antibodies if present, will bind to HO conjugates making antigen antibodies complex. This complex migrates through nitrocellulose membrane by capillary action. When the complex meets the line of the corresponding immobilized antibody (anti-human IgM &/or anti-human IgG) the complex is trapped forming a burgundy colored band which confirm a reactive test result. Absence of a colored band in the test region indicates a non reactive test result.
The test contains an internal control (C band) which should exhibit a burgundy colored band of the immunocomplex goat anti rabbit IgG/rabbit IgG-gold conjugate regardless of the color development on any of the test bands. Otherwise, the test result is invalid and the specimen must be retested with another device.

MATERIALS SUPPLIED

1. Test Cassette 2. Pipette Dropper 3.Desiccant 4.Buffer 5.Package Insert

MATERIAL REQUIRED BUT NOT PROVIDED

1. Clock or Timer
2. Specimen collection containers
3. Centrifuge (for plasma only)

STORAGE AND STABILITY

The kit can be stored at room temperature or refrigerated (2-30°C). The test device is stable through the expiration date printed on the sealed pouch. The test device must remain in the sealed pouch until use. DO NOT FREEZE. Do not use beyond the expiration date.

WARNINGS AND PRECAUTIONS

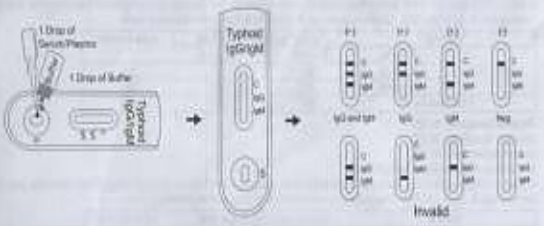
1.For professional In Vitro diagnostic use only. Do not use after expiration date.
2.This package insert must be read completely before performing the test. Failure to follow the insert gives inaccurate test results.
3.Do not use it if the foilpouch is damaged or broken.
4.Test is for single use only. Do not re-use under any circumstances.
5.Handle all specimens as if they contain infectious agents.Observe established precautions against microbiological hazards throughout testing and follow the standard procedures for proper disposal of specimens.
6.Wear protective clothing such as laboratory coats, disposable gloves and eye protection when specimens are assayed.
7.Humidity and temperature can adversely affect results.
8.Do not perform the test in a room with strong air flow, ie. electric fan or strong aircondtioning.

SPECIMEN COLLECTION

1. Typhoid IgG/IgM Rapid Test Cassette (Serum/Plasma) can be performed using either serum or plasma.
2. Separate the serum or plasma from blood as soon as possible to avoid haemolysis. Only clear, non-haemolysed specimens can be used.
3. Testing should be performed immediately after the specimens have been collected. Do not leave the specimens at room temperature for prolonged periods.specimens may be stored at 2-8°C for up to 3 days For long term storage, specimens should be kept below -20°C.
4. Bring specimens to room temperature prior to testing. Frozen specimens must be completely thawed and mixed well prior to testing. Specimens should not be frozen and thawed repeatedly.
5. If specimens are to be shipped ,they should be packed in compliance with usual regulations for transportation of aetiological agents.

WARNINGS AND PRECAUTIONS

Allow the test cassette, specimen, and/or controls to reach room temperature (15-30°C) prior to testing.
1. Remove the test cassette from the foil pouch and use it as soon as possible. Best results will be obtained if the assay is performed within one hour.
2. Place the test cassette on a clean and level surface. Hold the dropper vertically and transfer one drop of serum or plasma (about 20µL) to the sample well (S) then add one drop of sample buffer (about 40µL) immediately and start the timer. Avoid trapping air bubbles in the specimen well (S) . Please see illustration below.
3. Wait for the colored line(s) to appear. Read results in 15 minutes. Do not interpret the result after 15 minutes.



INTERPRETATION OF RESULTS

(Please refer to the illustration above)
1. POSITIVE:
1.1 IgM POSITIVE: In addition to the presence of C band, if only IgM band is developed, the test indicates for the presence of anti-*S. typhi* or paratyphi IgM in the specimen. The result is IgM positive.
1.2 IgG POSITIVE: In addition to the presence of C band, if only IgG band is developed, the test indicates for the presence of anti-*S. typhi* or paratyphi IgG in the specimen. The result is IgG positive.
1.3 IgG and IgM POSITIVE: In addition to the presence of C band, both IgM and IgG bands are developed, the test indicates for the presence of anti-*S. typhi* or paratyphi IgG and IgM in the specimen. The result is both IgG and IgM positive.
2. NEGATIVE: If only the C band is present, the absence of any burgundy color in the both test bands (IgM and IgG) indicates that no anti-*S. typhi* or paratyphi antibody is detected in the specimen. The result is negative or non-reactive.
3. INVALID: If no C band is developed, the assay is invalid regardless of any burgundy color in the test bands as indicated below. Insufficient specimen volume or incorrect procedural techniques are the most likely reasons for control line failure. Review the procedure and repeat the test with a new test cassette. If the problem persists,