

LAMPIRAN A

SURAT DETERMINASI *ECHINACEA PURPUREA*



DINAS KESEHATAN PROPINSI JAWA TIMUR
UPT MATERIE MEDICA

Jalan Lahor No.87 Telp. (0341) 593396 Batu (65313)

KOTA BATU

Nomor : 074 / 379/ 101.8 / 2014
Sifat : Biasa
Perihal : **Determinasi Tanaman Ekinase**

Memenuhi permohonan saudara :
Nama : FAWZIATUL KHOTIMAH
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Fakultas : Farmasi - Universitas Katolik Widya Mandala Surabaya

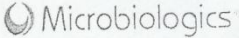
- Perihal determinasi tanaman ekinase
Kingdom : Plantae
Sub Kingdom : Tracheobionta (berpembuluh)
Super Divisi : Spermatophyta
Divisi : Magnoliophyta
Sub divisi : Angiospermae
Kelas : Dicotyledoneae
Sub kelas : Asterales
Bangsa : Asterales
Suku : Compositae (Asteraceae)
Marga : Echinacea
Jenis : *Echinacea purpurea* (L.) Moench
Sinonim : *Brauneria purpurea* (L.) Britt. = *Echinacea purpurea* (L.) = Moench var. *arkansana* Stevem. = *Rudbeckia purpurea* L.
Nama Umum : Echinacea, Purple coneflower, Kansas Snakeroot, Black Sampson
Kunci determinasi : 1b - 2b -3b -4b -12b-13b-14b-17b-18b-19b-20b-21b-22b-23b-24b-25b-26b-27b-79a-1b-3b-33b-41b-41a-42a-43b-60a-1a
- Morfologi : Tanaman perennial, tinggi tanaman dapat mencapai 60 - 80 cm. Diameter tajuk mencapai 40 - 60 cm. Jumlah anakan per tanaman dapat mencapai 4-10 anakan, setiap anakan dapat menghasilkan 5-8 kuntum bunga, jumlah bunga lebih kurang 20-80 kuntum per tanaman, bunga majemuk, warna bunga oranye kemerahan Daun tunggal, panjang, berambut, tepi bergerigi, bentuk memanjang dengan ujung runcing, pangkal meruncing dan tulang melengkung. Tumbuhan tidak berbatang. Akar serabut.
- Nama Simplisia : Echinaceae purpureae Herba/ Herba Ekinase
- Kandungan kimia : Minyak essential: hydrocarbon (2)-1,8-pentadecadiene, Polisakarida 1 (heteroxylan): arabinose, xylose, galactose, glucose dan 4-0-methylgluronic acid, Polisakarida 2 (arabinorhamnogalactic): rhamnose, arabinose, galactose, glucuronic acid, -Echinacein (isobutylamine), ditemukan pada akar E. angustifolia dengan kadar 0.01% sedangkan pada E. pallida ditemukan dengan kadar 0.001%, Echinacoside (glukosida) (mengandung antioksidan) ditemukan pada akar E angustifolia dengan kadar 1%, Echinolone (appolyacetylene), ditemukan pada akar E angustifolia, Echinacin B (polisakarida), Betain, Inulin, Glikoprotein, Protein terdapat pada akar E angustifolia dengan kadar 6.9 %, pada E purpurea dengan kadar, 5.3 % , Asam Kafein (Tanin), triglikoside asam kafein derivat dari echinacein, Alkylamide, Triglycoside dari asam cafeic derivat Echinacein, Derivat dari asam kafeic (asam cichoric), Fruktosa, Sukrosa, Senyawa Asam Lemak, Vitamin A,C dan E, Enzym, Resin, Senyawa-senyawa asam dan 13 senyawa polyacetylene.
- Penggunaan : Penelitian
- Daftar Pustaka
- Anonim, <http://www.obatbahanalam.blogspot.com/2009/12/immunopharmacological-herb.html>, Echinacea, diakses tanggal 10 November 2013
- Anonim, http://www.en.wikipedia.org/wiki/Echinacea_purpurea, diakses tanggal 10 November 2013
- Backer, A., Bakhuizen Van Den Brink, 1963, Flora OF Java (Spermatophytes only) Vol I, Wolters-Noordhoff NV, Groningen Netherlands
- Backer, A., Bakhuizen Van Den Brink, 1965, Flora OF Java (Spermatophytes only) Vol II, Wolters-Noordhoff NV, Groningen Netherlands
- Steenis, C.G.G Van Dr, *FLORA*, 2008, Pradnya Paramita, Jakarta

Demikian determinasi ini kami buat untuk dipergunakan sebagaimana mestinya.



LAMPIRAN B

SERTIFIKAT ANALISIS *STAPHYLOCOCCUS AUREUS*

 Microbiologics®

Certificate of Analysis: Lyophilized Microorganism Specification and Performance Upon Release


Specifications Microorganism Name: <i>Staphylococcus aureus</i> subsp. <i>aureus</i> Catalog Number: 0485 Lot Number: 485-198 Reference Number: ATCC® 6538™ Purity: < 0.1% Total Panel CFU Recovery: 45 CFU per 0.1ml Passage from Reference: 4	Expiration Date: 2014/09 Release Information: Quality Control Technologist: Marie M Howe Release Date: 2013/9/16
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Disclaimer: The last digits of the lot number appearing on the packaging slip is hereby a packaging event number. The lot number displayed on this certificate is the actual base lot number.


Note for Vitek®: Although the Vitek® panel uses many conventional tests, the unique environment of the card, combined with the short incubation period, may produce results that differ from published results obtained by other methods.

ⓘ Refer to the enclosed product insert for instructions, intended use and hazard/safety information.

Individual products are traceable to a recognized culture collection.

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(1) These tests are accredited to ISO/IEC 17025:2005.

 ACCREDITED
TESTING CERT #2655-01

Reviewed by: Marie M Howe

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Certificate of Analysis: Lyophilized Microorganism Specification and Performance Upon Release

Specifications Microorganism Name: <i>Staphylococcus aureus</i> subsp. <i>aureus</i> Catalog Number: 6485 Lot Number: 485-195 Reference Number: ATCC® 6538™ Purity: < 0.1% Total Pellet CFU Recovery: 45 CFU per 0.1ml ✓ Passage from Reference: 4	Expiration Date: 2014/09 ✓ Release Information: Quality Control Technologist: Marie M Howe Release Date: 2013/9/16
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Performance Macroscopic Features: Medium to large, convex, circular, glistening, smooth, creamy, opaque, beta hemolytic - both light SBAP gold and darker gold colonies may be present. Microscopic Features: Gram positive cocci occurring singly, in pairs and in irregular clusters.	Medium: SBAP Method: Gram Stain (1)
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Vitek GP (1)	Results	Other Features/ Challenges: Results
Phenotypic Features	-	
D-AMYGDALIN	-	
PHOSPHATIDYLINOSITOL PHOSPHOLIPASE C	-	
D-XYLOSE	-	
ARGININE DIHYDROLASE 1	+	
BETA-GALACTOSIDASE	-	
ALPHA-GLUCOSIDASE	-	
Ala-Pro-Phe-ARYLAMIDASE	-	
CYCLODEXTRIN	-	
L-Aspartate ARYLAMIDASE	-	
BETA GALACTOPYRANOSIDASE	-	
ALPHA-MANNOSIDASE	-	
PHOSPHATASE	-	
Leucine ARYLAMIDASE	-	
L-Proline ARYLAMIDASE	-	
BETA GLUCURONIDASE	-	
ALPHA-GALACTOSIDASE	-	
L-Pyrrolydonyl-ARYLAMIDASE	-	
BETA-GLUCORONIDASE	-	
Alanine ARYLAMIDASE	-	
Tyrosine ARYLAMIDASE	-	
D-SORBITOL	-	
UREASE	-	
POLYMXIN-B RESISTANCE	+	
D-GALACTOSE	+	
D-RIBOSE	+	
L-LACTATE alkalization	+	
LACTOSE	+	
N-ACETYL-D-GLUCOSAMINE	+	
D-MALTOSE	+	
BACITRACIN RESISTANCE	+	
NOVOBIOCIN RESISTANCE	+	
GROWTH IN 6.5% NaCl	+	
D-MANNITOL	+	
D-MANNOSE	+	
METHYL-B-D-GLUCOPYRANOSIDE	+	
PULLULAN	+	
D-RAFFINOSE	+	
O/129 RESISTANCE (comp.vitro.)	+	
SALICIN	+	
SACCHAROSE/SUCROSE	+	
D-TREHALOSE	+	
ARGININE DIHYDROLASE 2	+	
OPTOCHIN RESISTANCE	+	


 Brad Goskovic, President
 AUTHORIZED SIGNATURE

Reviewed by: AM 05/01/13

LAMPIRAN C

PERHITUNGAN RANDEMEN EKSTRAK

$$\% \text{ randemen ekstrak} = \frac{\text{Berat ekstrak yang didapatkan}}{\text{Berat simplisia}} \times 100\%$$

Simplisia	Berat simplisia (g)	Berat ekstrak yang didapatkan (g)	% randemen
Akar	403,45	37,55	9,31
Batang	900	96,51	10,72
Daun	2000	112,96	5,65
Bunga	321,26	43,78	13,63

LAMPIRAN D
PERHITUNGAN STANDARISASI

Perhitungan Kadar Abu

$$\text{Kadar abu} = \frac{(\text{W abu} + \text{W krus}) - \text{W krus}}{\text{W simplisia}} \times 100\%$$

Perhitungan Kadar Abu Simplisia

Simplisia	W simplisia (g)	W krus (g)	W abu + W krus (g)	Persen kadar abu (%)	Rata-rata persen kadar abu (%)
Akar	1,0001	50,477	50,5819	10,49	10,54
	1,004	50,1574	50,2636	10,58	
	1,0018	51,4594	51,565	10,54	
Batang	1,0051	20,7351	20,8541	11,84	11,69
	1,0017	21,7152	21,8241	10,87	
	1,0003	34,565	34,6886	12,36	
Daun	0,5002	34,3271	34,4021	14,99	15,04
	0,5023	34,5634	34,6388	15,01	
	0,5004	32,9849	33,0605	15,11	
Bunga	1,0026	32,9877	33,0993	11,13	11,22
	1,005	22,31	22,4199	10,94	
	1,0015	50,1604	50,2765	11,59	

Perhitungan Kadar Abu Ekstrak

Ekstrak	W _{simplicia} (g)	W _{krus} (g)	W abu + W krus (g)	Persen kadar abu (%)	Rata-rata persen kadar abu (%)
Akar	0,5049	42,0993	42,1634	12,70	12,59
	0,5004	44,593	44,6679	14,97	
	0,5088	44,7569	44,8083	10,10	
Batang	1,0094	27,0894	27,254	16,31	18,24
	1,0021	24,917	25,117	19,96	
	1,0074	28,2363	28,4221	18,44	
Daun	1,0025	25,929	25,9663	3,72	3,26
	1,009	26,293	26,322	2,87	
	1,0042	27,1211	27,1532	3,20	
Bunga	0,5004	28,8798	29,0711	38,23	36,71
	0,5001	26,188	26,3526	32,91	
	0,5016	29,0889	29,2845	39,00	

Perhitungan Kadar Air

$$\text{Kadar air} = \frac{W_{\text{simplicia}} - (W_{\text{simplicia}} + W_{\text{cawan}}) - W_{\text{cawan}}}{W_{\text{simplicia}}} \times 100\%$$

Perhitungan Kadar Air Simplicia

Simplicia	W _{simplicia} (g)	W _{cawan} (g)	W simplicia + W cawan (g)	Persen kadar air (%)	Rata-rata persen kadar air (%)
Akar	2,0035	29,0892	30,9258	8,33	8,22
	2,0022	29,5034	31,3397	8,29	
	2,0049	29,4362	31,2797	8,05	
Batang	1,0055	29,2252	30,1678	6,26	5,84
	1,0012	30,6211	31,5598	6,24	
	1,0002	28,5867	29,5366	5,03	
Daun	2,0017	29,085	30,9068	9,07	9,25
	2,0007	29,498	31,3144	9,21	
	2,0032	29,4323	31,2457	9,47	
Bunga	2,0013	29,2203	31,0154	10,30	9,80
	2,001	30,6154	32,4125	10,19	
	2,0013	28,5901	30,3925	9,94	
	0,5061	28,456	28,9177	8,77	

Perhitungan Kadar Air Ekstrak

Ekstrak	W simplisia (g)	W cawan (g)	W simplisia + W cawan (g)	Persen kadar air (%)	Rata-rata persen kadar air (%)
Akar	1,0016	29,2253	30,1287	9,80	9,71
	1,0016	30,6205	31,5246	9,73	
	1,0036	28,5877	29,4951	9,59	
Batang	1,0066	29,083	29,8713	23,67	29,01
	1,0018	29,4348	30,1314	30,47	
	1,0015	28,95	29,2985	30,27	
	0,4998	67,1851	67,8698	31,63	
Daun	1,0022	29,0822	29,9966	8,76	8,49
	1,0055	29,434	30,3568	8,22	
	1,0056	67,1863	68,1066	8,48	
Bunga	1,0029	53,6731	54,391	28,42	28,78
	1,0032	54,7734	55,4808	29,49	
	1,0021	57,4758	58,193	28,43	

Perhitungan Kadar Sari Larut Air

$$\text{Kadar sari larut air} = \frac{W_{\text{simplisia}} - (W_{\text{simplisia}} + W_{\text{cawan}}) - W_{\text{cawan}}}{W_{\text{simplisia}}} \times 5 \times 100\%$$

Simplisia	W simplisia (g)	W cawan (g)	W simplisia + W cawan (g)	Persen kadar sari larut air (%)	Rata-rata persen kadar sari larut air (%)
Akar	1,0074	29,2250	29,2818	28,19	28,34
	1,0090	30,6201	30,6780	28,69	
	1,0035	28,5867	28,6432	28,15	
Batang	1,0056	29,0814	29,1345	26,40	26,27
	1,0006	29,4334	29,4859	26,23	
	1,0088	67,1871	67,2399	26,17	
Daun	0,5069	82,6594	82,6879	28,11	30,75
	0,5049	54,7678	54,7987	30,60	
	0,5038	69,0323	69,0661	33,55	
Bunga	0,9999	35,3903	35,4564	33,05	31,68
	1,0033	72,5511	72,6144	31,55	
	1,0058	53,2663	53,3268	30,97	

Perhitungan Kadar Sari Larut Etanol

Kadar sari larut etanol =

$$\frac{W_{\text{simplisia}} - (W_{\text{simplisia}} + W_{\text{cawan}}) - W_{\text{cawan}}}{W_{\text{simplisia}}} \times 5 \times 100\%$$

Simplisia	W _{simplisia} (g)	W _{cawan} (g)	W _{simplisia} + W _{cawan} (g)	Persen kadar sari larut etanol (%)	Rata-rata persen kadar sari larut etanol (%)
Akar	1,0019	29,2276	29,2545	13,42	14,66
	0,9999	30,6254	30,6496	17,10	
	1,0061	28,5901	28,6172	13,47	
Batang	1,0019	29,085	29,1097	12,33	13,82
	1,0015	29,4323	29,4609	14,28	
	1,0025	67,1851	67,2149	14,86	
Daun	0,5019	54,7736	54,7819	8,27	17,00
	0,5015	79,0567	79,0788	22,03	
	0,5004	82,6545	82,6752	20,68	
Bunga	1,0025	35,3905	35,4262	17,81	18,52
	1,0028	72,5522	72,5934	20,54	
	1,0023	53,264	53,2985	17,21	