
























LAMPIRAN 1







Data Uji Yang Digunakan Untuk Penelitian







No.	Nama Objek	Cirri Ekstraksi	Hasil uji (r)	Hasil uji (g)	Hasil uji (b)
1	 uji_sn1	Ekstraksi warna ASM CON COR VAR IDM ENT	0.4084 0.4403 25.2188 0.9972 4509.5471 0.7761 4.3756 S	0.3353 0.4369 30.4107 0.9966 4503.5642 0.7736 4.4139 S	0.2564 0.4294 25.9924 0.9971 4492.5096 0.7689 4.5037 S
2	 uji_sn2	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3389 0.4283 30.5361 0.9967 4599.0602 0.7562 4.4613 S	0.3403 0.4264 34.8348 0.9962 4595.0734 0.7548 4.4828 S	0.2608 0.4163 28.7349 0.9969 4580.1493 0.7482 4.6048 S
3	 uji_sn3	Ekstraksi warna ASM CON COR VAR IDM ENT	0.4016 0.4274 29.1228 0.9967 4351.3798 0.7558 4.4643 S	0.3387 0.4235 35.2082 0.9962 4344.3895 0.7529 4.5083 S	0.2597 0.4165 30.9755 0.9964 4333.6484 0.7485 4.5960 S
4	 uji_sn4	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3946 0.4258 27.8290 0.9969 4426.4010 0.7563 4.4760 S	0.3419 0.9083 364.1790 0.6375 320.2458 0.9559 0.7906 TS	0.2634 0.4140 26.1577 0.9970 4408.2397 0.7485 4.6164 S
5	 uji_sn5	Ekstraksi warna ASM CON COR VAR IDM ENT	0.4002 0.4399 26.8644 0.9970 4475.5774 0.7701 4.3759 S	0.3395 0.8644 409.3863 0.8314 1009.4330 0.9365 1.1352 TS	0.2603 0.4346 32.2251 0.9964 4463.3618 0.7667 4.4390 S







6	 uji_sn6	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3962 0.3896 25.3232 0.9973 4602.4760 0.7484 3.7550 S	0.3459 0.3887 26.7983 0.9971 4600.5758 0.7476 4.7662 S	0.2579 0.3838 28.2047 0.9969 4589.4335 0.7445 4.8267 S
7	 uji_sn7	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3939 0.4265 28.1522 0.9968 4435.4497 0.7568 4.4741 S	0.3420 0.9069 382.7918 0.6342 331.7627 0.9551 0.8002 TS	0.2641 0.4148 25.4942 0.9971 4417.8960 0.7490 4.6142 S
8	 uji_sn8	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3988 0.4285 30.1589 0.9967 4592.3243 0.7564 4.4637 S	0.3401 0.4264 34.6886 0.9962 4587.8814 0.7547 4.4890 S	0.2610 0.4164 29.0602 0.9968 4573.1915 0.7483 4.6083 S
9	 uji_sn9	Ekstraksi warna ASM CON COR VAR IDM ENT	0.4133 0.3932 27.6118 0.9971 4680.2626 0.7359 4.8029 S	0.3392 0.3924 28.9202 0.9969 4678.6776 0.7353 4.8128 S	0.2475 TS
10	 uji_sn10	Ekstraksi warna ASM CON COR VAR IDM ENT	0.4036 0.4268 28.8848 0.9968 4510.1622 0.7576 4.4620 S	0.3389 0.4244 32.6367 0.9964 4505.6982 0.7557 4.4901 S	0.2575 0.4172 30.8593 0.9966 4493.2131 0.7511 4.5784 S
11	 uji_sn11	Ekstraksi warna ASM CON COR VAR IDM ENT	0.4058 0.3911 27.4976 0.9969 4441.6656 0.7415 4.8136 S	0.3411 0.8801 329.1891 0.8362 839.9762 0.9432 1.0427 TS	0.2532 TS







12	 uji_sn12	Ekstraksi warna ASM CON COR VAR IDM ENT S	0.4108 0.4257 29.2398 0.9967 4359.1144 0.7546 4.4519 S	0.3335 0.4222 34.6357 0.9960 4352.7896 0.7520 4.4918 S	0.2558 0.4162 29.9913 0.9966 4343.7500 0.7482 4.5685 S
13	 uji_sn13	Ekstraksi warna ASM CON COR VAR IDM ENT S	0.4038 0.3999 30.1578 0.9968 4678.3307 0.7383 4.7773 S	0.3410 0.3983 32.5084 0.9965 4675.3043 0.7371 4.7955 S	0.2552 0.8118 328.2566 0.9105 1670.7078 0.9142 1.5727 TS
14	 uji_sn14	Ekstraksi warna ASM CON COR VAR IDM ENT S	0.3894 0.4266 27.6163 0.9969 4474.1161 0.7439 4.6372 S	0.3463 0.8906 421.7154 0.6962 483.1616 0.9477 0.9463 TS	0.2642 0.4166 26.2235 0.9971 4458.6853 0.7373 4.7571 S
15	 uji_sn15	Ekstraksi warna ASM CON COR VAR IDM ENT S	0.4016 0.4274 29.1228 0.9967 4351.3798 0.7558 4.4643 S	0.3387 0.4235 35.2082 0.9960 4344.3895 0.7529 4.5083 S	0.2597 0.4165 30.9755 0.9964 4333.6484 0.7485 4.5960 S
16	 uji_sn16	Ekstraksi warna ASM CON COR VAR IDM ENT S	0.3961 0.3888 26.2185 0.9972 4594.8718 0.7391 4.8108 S	0.3462 0.3876 28.0098 0.9970 4592.5074 0.7382 4.8258 S	0.2577 0.8226 267.1688 0.9204 1545.2810 0.9211 1.4594 TS
17	 uji_sn17	Ekstraksi warna ASM CON COR VAR IDM ENT S	0.4002 0.4399 26.8644 0.9970 4475.5774 0.7701 4.3759 S	0.3395 0.8644 409.3863 0.8314 1009.4330 0.9365 1.1352 TS	0.2603 0.4346 32.2251 0.9964 4463.3618 0.7667 4.4390 S







18	 uji_sn18	Ekstraksi warna ASM CON COR VAR IDM ENT	0.4084 0.4403 25.2188 0.9972 4509.5471 0.7761 4.3756 S	0.3353 0.4369 30.4107 0.9966 4503.5642 0.7736 4.4139 S	0.2564 0.4294 25.9924 0.9971 4492.5096 0.7689 4.5037 S
19	 uji_sn19	Ekstraksi warna ASM CON COR VAR IDM ENT	0.4036 0.4268 28.8848 0.9968 4510.1622 0.7576 4.4620 S	0.3389 0.4244 32.6367 0.9964 4505.6982 0.7557 4.4901 S	0.2575 0.4172 30.8593 0.9966 4493.2131 0.7511 4.5784 S
20	 uji_sn20	Ekstraksi warna ASM CON COR VAR IDM ENT	0.4133 0.3932 27.6118 0.9969 4680.2626 0.7359 4.8029 S	0.3392 0.3924 28.9202 0.9969 4678.6776 0.7353 4.8128 S	0.2475 TS
21	 uji_sv1	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3780 0.4835 32.2344 0.9969 5253.2309 0.7682 4.1905 S	0.3494 0.4834 32.5573 0.9969 5252.9125 0.7680 4.1924 S	0.2726 0.8171 439.6963 0.9038 2065.5944 0.9145 1.5278 TS
22	 uji_sv2	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3806 0.5362 29.3700 0.9970 4893.8564 0.8053 3.6675 S	0.3494 0.5356 30.4290 0.9969 4893.0238 0.8049 3.6729 S	0.2701 0.8165 357.4354 0.9165 1960.9360 0.9175 1.5186 TS
23	 uji_sv3	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3773 0.4677 34.8481 0.9968 5401.4802 0.7489 4.3836 S	0.3477 0.4676 35.6724 0.9967 5401.1147 0.7488 4.3845 S	0.2750 0.7482 474.0899 0.9254 2938.4321 0.8832 2.0290 TS







24	 uji_sv4	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3681 0.5316 33.5035 0.9967 5101.5248 0.7878 3.8173 S	0.3677 0.5314 33.9677 0.9967 5101.1990 0.7877 3.8191 S	0.2642 0.8398 410.9677 0.8990 1828.7269 0.9254 1.3585 TS
25	 uji_sv5	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3809 0.5092 32.4886 0.9968 5122.6962 0.7777 3.9807 S	0.3429 0.5088 33.0890 0.9968 5122.1218 0.7775 3.9847 S	0.2761 0.7511 433.7431 0.9302 2890.2684 0.8861 2.0055 TS
26	 uji_sv6	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3830 0.4817 34.2581 0.9969 5561.3475 0.7579 4.2484 S	0.3474 0.4816 34.3363 0.9969 5561.1868 0.7578 4.2496 S	0.2696 0.7689 536.1456 0.9056 2571.5590 0.8927 1.9105 TS
27	 uji_sv7	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3770 0.5072 31.9598 0.9969 5164.1255 0.7810 3.9656 S	0.3445 0.5071 32.6736 0.9968 5163.7616 0.7809 3.9667 S	0.2784 0.7657 493.0016 0.9150 2654.7455 0.8937 1.8906 TS
28	 uji_sv8	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3766 0.4812 32.7178 0.9969 5294.1572 0.7571 4.2529 S	0.3502 0.4812 33.2271 0.9969 5293.9226 0.7571 4.2535 S	0.2733 0.7814 434.4759 0.9170 2400.7293 0.8983 1.8021 TS
29	 uji_sv9	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3803 0.4790 37.0107 0.9966 5387.5612 0.7591 4.3021 S	0.3481 0.4790 37.4051 0.9965 5387.4477 0.7591 4.3017 S	0.2716 0.8164 424.2380 0.9118 2193.6894 0.9135 1.5534 TS







30	 uji_sv10	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3750 0.5184 36.2449 0.9966 5308.7103 0.7739 4.0092 S	0.3481 0.5181 37.0373 0.9965 5308.1343 0.7737 4.0125 S	0.2769 0.8099 487.7126 0.8994 2181.2521 0.9102 1.6159 TS
31	 uji_sv11	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3817 0.4806 38.3797 0.9965 5390.3316 0.7513 4.3294 S	0.3474 0.4806 38.7783 0.9964 5390.1900 0.7513 4.3295 S	0.2709 0.7852 508.7300 0.9097 2561.4584 0.8984 1.7731 TS
32	 uji_sv12	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3775 0.5298 35.1682 0.9967 5309.7783 0.7562 4.4613 S	0.3485 0.5296 35.8504 0.9966 5309.3421 0.7825 3.8740 S	0.2740 0.8040 405.0966 0.9177 2260.0407 0.9087 1.6700 TS
33	 uji_sv13	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3815 0.4683 40.2467 0.9963 5481.1022 0.7462 4.4322 S	0.3484 0.4683 40.5092 0.9963 5480.9962 0.7462 4.4324 S	0.2701 0.7855 621.5192 0.8853 2398.3104 0.8979 1.7822 TS
34	 uji_sv14	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3809 0.5089 35.2829 0.9966 5118.9331 0.7715 4.0276 S	0.3428 0.5084 36.3708 0.9965 5118.1105 0.7712 4.0323 S	0.2763 0.7508 449.6351 0.9275 2878.2444 0.8842 2.0297 TS
35	 uji_sv15	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3817 0.4704 35.1299 0.9970 5789.7045 0.7568 4.3161 S	0.3484 0.4703 35.6732 0.9969 5789.4164 0.7567 4.3169 S	0.2699 0.7141 744.6834 0.8945 3155.4075 0.8668 2.3209 TS







36	 uji_sv16	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3770 0.5078 34.8245 0.9966 5157.0213 0.7748 4.0056 S	0.3446 0.5073 35.5310 0.9966 5156.2628 0.7745 4.0112 S	0.2784 0.7612 477.4181 0.9189 2704.2176 0.8897 1.9454 TS
37	 uji_sv17	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3707 0.4993 43.1825 0.9938 6220.4164 0.7660 4.1622 S	0.3511 0.4991 43.8482 0.9965 6219.9398 0.7659 4.1643 S	0.2782 0.8034 528.2648 0.9101 2675.3493 0.9065 1.6795 TS
38	 uji_sv18	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3787 0.4833 35.0778 0.9967 5230.0598 0.7612 4.2443 S	0.3487 0.4832 35.5455 0.9966 5229.7502 0.7611 4.2458 S	0.2726 0.8122 421.1257 0.9107 2148.3340 0.9115 1.5805 TS
39	 uji_sv19	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3767 0.4498 30.6367 0.9973 5704.6359 0.7609 4.3686 S	0.3516 0.4497 30.7694 0.9973 5704.4970 0.7608 4.3696 S	0.2717 0.7106 525.3274 0.9247 3223.4288 0.8724 2.2729 TS
40	 uji_sv20	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3820 0.4772 39.3545 0.9963 5349.5831 0.7480 4.3517 S	0.3456 0.4770 39.7164 0.9963 5349.1361 0.7479 4.3547 S	0.2725 0.7648 409.6001 0.9322 2817.5300 0.8891 1.9369 TS
41	 uji_mp1	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3402 0.6567 34.6267 0.9961 4449.1332 0.8535 2.7756 TS	0.3648 0.6559 36.7677 0.9959 4448.0296 0.8530 2.7840 TS	0.2950 0.6465 31.0121 0.9965 4448.0231 0.8482 2.8840 TS







42	 uji_mp2	Ekstraksi warna ASM CON COR VAR IDM ENT TS	0.3462 0.6444 41.2921 0.9953 4398.5116 0.8413 2.8797 TS	0.3615 0.6424 45.0958 0.9949 4396.6670 0.8401 2.8999 TS	0.2923 0.6305 35.2831 0.9960 4401.8616 0.8339 3.0270 TS
43	 uji_mp3	Ekstraksi warna ASM CON COR VAR IDM ENT S	0.3313 0.7092 32.6557 0.9960 4035.2808 0.8788 2.3396 S	0.3633 0.7071 37.7084 0.9953 4033.6626 0.8776 2.3601 S	0.3054 0.6946 35.8907 0.9956 4039.5943 0.8712 2.4872 S
44	 uji_mp4	Ekstraksi warna ASM CON COR VAR IDM ENT TS	0.3569 0.6065 47.4627 0.9954 5103.7834 0.8188 3.2593 TS	0.3482 0.6055 49.3152 0.9952 5102.5373 0.8181 3.2704 TS	0.2949 0.5904 42.8235 0.9958 5098.0039 0.8097 3.4329 TS
45	 uji_mp5	Ekstraksi warna ASM CON COR VAR IDM ENT TS	0.3456 0.6182 42.4193 0.9958 4996.1538 0.8292 3.1236 TS	0.3648 0.6175 45.1997 0.9955 4994.6735 0.8288 3.1305 TS	0.2896 0.8047 410.2083 0.9259 2561.5140 0.9084 1.6672 TS
46	 uji_mp6	Ekstraksi warna ASM CON COR VAR IDM ENT S	0.3439 0.6844 31.7665 0.9962 4211.7857 0.8734 2.5015 S	0.3463 0.6829 34.1346 0.9960 4210.9550 0.8725 2.5170 S	0.3098 0.8047 410.2083 0.9259 2561.5140 0.9084 1.6672 TS
47	 uji_mp7	Ekstraksi warna ASM CON COR VAR IDM ENT S	0.3330 0.6863 31.2619 0.9962 4058.2904 0.8654 2.5470 S	0.3611 0.6842 35.5788 0.9956 4056.7245 0.8641 2.5681 S	0.3059 0.6727 31.6679 0.9961 4060.5566 0.8582 2.6853 S




48	 uji_mp8	Ekstraksi warna ASM CON COR VAR IDM ENT TS	0.3537 0.5883 46.7544 0.9954 5033.6285 0.8103 3.3759 TS	0.3618 0.5863 50.6044 0.9950 5031.2972 0.8090 3.3975 TS	0.2845 0.8139 574.4240 0.8671 1873.8980 0.9119 1.5952 TS
49	 uji_mp9	Ekstraksi warna ASM CON COR VAR IDM ENT TS	0.3346 0.6818 40.8934 0.9954 4470.7127 0.8545 2.6416 TS	0.3658 0.6801 44.6250 0.9950 4469.2062 0.8536 2.6577 TS	0.2996 0.6666 40.7121 0.9955 4471.3160 0.8464 2.7976 TS
50	 uji_mp10	Ekstraksi warna ASM CON COR VAR IDM ENT S	0.3391 0.6767 32.7374 0.9958 3926.9341 0.8623 2.6147 S	0.3615 0.6753 36.0093 0.9954 3925.6407 0.8615 2.6278 S	0.2994 0.8555 355.7923 0.8991 1585.5152 0.9335 1.2570 TS
51	 uji_mp11	Ekstraksi warna ASM CON COR VAR IDM ENT S	0.3314 0.7094 34.9018 0.9957 4026.6575 0.8744 2.3685 S	0.3630 0.7067 40.7854 0.9950 4024.9262 0.8729 2.3947 S	0.3056 0.6946 39.3452 0.9951 4030.3101 0.8666 2.5176 S
52	 uji_mp12	Ekstraksi warna ASM CON COR VAR IDM ENT S	0.3402 0.6837 38.4354 0.9952 3960.0940 0.8599 2.5766 S	0.3464 0.6811 42.2646 0.9950 4210.9812 0.8589 2.6274 S	0.3087 0.6710 36.1426 0.9957 4215.0323 0.8536 2.7328 S
53	 uji_mp13	Ekstraksi warna ASM CON COR VAR IDM ENT S	0.3394 0.6765 35.3029 0.9955 3917.5478 0.8578 2.6504 S	0.3614 0.6747 39.0484 0.9950 3916.0511 0.8568 2.6675 S	0.2992 0.6683 34.3675 0.9956 3917.4556 0.8534 2.7371 S

54	 uji_mp14	Ekstraksi warna ASM CON COR VAR IDM ENT S	0.3348 0.6856 38.1109 0.9955 4207.6310 0.8621 2.5745 S	0.3635 0.6841 42.0523 0.9950 4206.0809 0.8612 2.5893 S	0.3017 0.6759 35.9815 0.9957 4209.5400 0.8569 2.6765 S
55	 uji_mp15	Ekstraksi warna ASM CON COR VAR IDM ENT S	0.3327 0.6863 30.5895 0.9963 4067.9778 0.8670 2.5340 S	0.3645 0.6725 38.0308 0.9954 4136.6006 0.8607 2.6414 S	0.2964 0.8529 378.2032 0.8927 1574.0713 0.9316 1.2839 TS
56	 uji_mp16	Ekstraksi warna ASM CON COR VAR IDM ENT S	0.3289 0.7293 34.6861 0.9954 3719.3261 0.8841 2.2057 S	0.3623 0.7248 43.6317 0.9942 3717.2102 0.8815 2.2497 S	0.3088 0.7130 43.9625 0.9941 3723.5171 0.8754 2.3660 S
57	 uji_mp17	Ekstraksi warna ASM CON COR VAR IDM ENT S	0.3314 0.7094 34.9018 0.9957 4026.6575 0.8744 2.3685 S	0.3631 0.7076 38.9195 0.9952 4037.1522 0.8797 2.3409 S	0.3057 0.6938 35.0009 0.9957 4045.1086 0.8727 2.4808 S
58	 uji_mp18	Ekstraksi warna ASM CON COR VAR IDM ENT S	0.3402 0.6837 38.4354 0.9952 3960.0940 0.8599 2.5766 S	0.3606 0.6809 44.5533 0.9944 3957.9317 0.8582 2.6035 S	0.2992 0.6743 37.1274 0.9953 3961.9757 0.8549 2.6764 S
59	 uji_mp19	Ekstraksi warna ASM CON COR VAR IDM ENT S	0.3394 0.6765 35.3029 0.9955 3917.5478 0.8578 2.6504 S	0.3628 0.7030 39.0879 0.9951 3965.3647 0.8721 2.3910 S	0.3076 0.6889 39.6085 0.9950 3969.0955 0.8646 2.5330 S



60	 uji_mp20	Ekstraksi warna ASM CON COR VAR IDM ENT S	0.3348 0.6856 38.1109 0.9955 4207.6310 0.8621 2.5745 S	0.3610 0.7069 43.1726 0.9944 3799.6374 0.8740 2.3526 S	0.3065 0.6948 40.6716 0.9947 3806.3729 0.8676 2.4753 S
61	 uji_ms1	Ekstraksi warna ASM CON COR VAR IDM ENT S	0.3022 0.8953 29.2102 0.9921 1829.3011 0.9553 0.9179 S	0.3648 0.8882 54.5376 0.9853 1831.6325 0.9516 0.9788 S	0.3330 0.8739 76.4104 0.9798 1854.6159 0.9446 1.1022 S
62	 uji_ms2	Ekstraksi warna ASM CON COR VAR IDM ENT S	0.3051 0.8468 20.2210 0.9952 2083.0376 0.9384 1.2788 S	0.3653 0.8441 24.9474 0.9940 2083.1493 0.9370 1.3029 S	0.3296 0.8270 35.1045 0.9917 2093.3658 0.9285 1.4549 S
63	 uji_ms3	Ekstraksi warna ASM CON COR VAR IDM ENT S	0.3063 0.8261 21.2049 0.9952 2209.5090 0.9269 1.4597 S	0.3680 0.8241 25.3485 0.9943 2209.0464 0.9258 1.4778 S	0.3257 0.8098 30.1221 0.9933 2217.6127 0.9187 1.6091 S
64	 uji_ms4	Ekstraksi warna ASM CON COR VAR IDM ENT S	0.3063 0.8346 21.4601 0.9951 2183.2143 0.9314 1.3812 S	0.3684 0.8328 24.5888 0.9944 2183.0690 0.9304 1.3977 S	0.3253 0.8143 34.5996 0.9922 2192.5661 0.9213 1.5626 S
65	 uji_ms5	Ekstraksi warna ASM CON COR VAR IDM ENT S	0.3096 0.8184 21.9412 0.9954 2399.9998 0.9245 1.5008 S	0.3683 0.8169 25.1082 0.9948 2399.4916 0.9237 1.5140 S	0.3221 0.8026 27.1661 0.9914 2407.9442 0.9166 1.6481 S




66	 uji_ms6	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3021 0.8526 21.1958 0.9945 1913.0107 0.9382 1.2537 S	0.3669 0.8497 27.3676 0.9929 1912.4111 0.9367 1.2785 S	0.3310 0.8321 37.9160 0.9902 1924.3141 0.9279 1.4345 S
67	 uji_ms7	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3042 0.8639 21.2034 0.9942 1814.0682 0.9428 1.1622 S	0.3662 0.8576 33.3803 0.9909 1814.8894 0.9395 1.2163 S	0.3296 0.8371 53.3235 0.9856 1825.5771 0.9292 1.3899 S
68	 uji_ms8	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3040 0.8521 21.5584 0.9949 2103.0337 0.9364 1.2800 S	0.3657 0.8504 24.6881 0.9942 2103.0313 0.9354 1.2956 S	0.3304 0.8308 37.9556 0.9911 2111.3389 0.9256 1.4681 S
69	 uji_ms9	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3057 0.8469 20.2838 0.9951 2073.4123 0.9368 1.2897 S	0.3649 0.8435 26.7193 0.9936 2073.1488 0.9350 1.3192 S	0.3294 0.8258 38.5904 0.9908 2082.2501 0.9261 1.4758 S
70	 uji_ms10	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3042 0.8564 21.9938 0.9947 2049.0034 0.9391 1.2267 S	0.3653 0.8548 24.9126 0.9940 2049.1109 0.9382 1.2419 S	0.3306 0.8403 31.5652 0.9924 2058.2603 0.9310 1.3725 S
71	 uji_ms11	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3040 0.8578 21.0435 0.9945 1904.9559 0.9396 1.2137 S	0.3644 0.8548 27.9539 0.9927 1904.3612 0.9380 1.2386 S	0.3316 0.8393 36.2993 0.9906 1915.0733 0.9302 1.3784 S

72	 uji_ms12	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3047 0.8645 22.0829 0.9938 1758.7195 0.9405 1.1831 S	0.3649 0.8611 28.8772 0.9919 1759.5099 0.9388 1.2130 S	0.3303 0.8475 36.4229 0.9898 1770.8097 0.9321 1.3365 S
73	 uji_ms13	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3053 0.8500 22.6000 0.9945 2025.3972 0.9337 1.3135 S	0.3653 0.8484 25.4654 0.9938 2025.2433 0.9328 1.3275 S	0.3294 0.8347 31.8091 0.9922 2033.8688 0.9260 1.4527 S
74	 uji_ms14	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3061 0.8463 20.7839 0.9948 2003.5094 0.9359 1.2893 S	0.3651 0.8425 28.4259 0.9930 2002.9940 0.9339 1.3218 S	0.3288 0.8245 39.1078 0.9904 2013.2222 0.9248 1.4817 S
75	 uji_ms15	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3023 0.8638 21.7887 0.9940 1796.6261 0.9421 1.1735 S	0.3650 0.8601 28.7238 0.9921 1796.5696 0.9402 1.2051 S	0.3328 0.8450 37.3794 0.9898 1807.8802 0.9328 1.3406 S
76	 uji_ms16	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3009 0.8737 22.5144 0.9932 1653.6396 0.9453 1.1074 S	0.3659 0.8669 37.7355 0.9887 1655.1988 0.9418 1.1652 S	0.3331 0.8490 57.0614 0.9832 1666.5229 0.9328 1.3181 S
77	 uji_ms17	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3007 0.8602 22.2479 0.9942 1908.8828 0.9385 1.2271 S	0.3676 0.8570 28.1936 0.9927 1909.5456 0.9368 1.2560 S	0.3317 0.8391 43.1639 0.9889 1918.1946 0.9278 1.4111 S

78	 uji_ms18	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3004 0.8623 21.8654 0.9942 1873.7050 0.9414 1.1847 S	0.3678 0.8582 29.9306 0.9921 1873.7279 0.9392 1.2205 S	0.3318 0.8435 37.8344 0.9901 1884.6345 0.9320 1.3515 S
79	 uji_ms19	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3027 0.8524 21.9531 0.9943 1907.4757 0.9362 1.2702 S	0.3665 0.8487 30.2882 0.9921 1906.8770 0.9342 1.3022 S	0.3308 0.8281 46.0557 0.9881 1918.3336 0.9238 1.4819 S
80	 uji_ms20	Ekstraksi warna ASM CON COR VAR IDM ENT	0.3025 0.8735 21.4572 0.9934 1625.0407 0.9456 1.1028 S	0.3656 0.8656 37.0400 0.9887 1627.6420 0.9415 1.1705 S	0.3319 0.8394 72.4830 0.9784 1639.5997 0.9282 1.3847 S

Data Uji Bukan Jeruk Yang Digunakan Untuk Penelitian

No.	Nama Objek	Ciri Ekstraksi	Hasil Nilai(r)	Hasil Nilai(g)	Hasil Nilai(b)
1	 Uji_bj1	warna ASM CON COR VAR IDM ENT	0.2913 S	0.3728 0.8048 25.0279 0.9964 3418.1040 0.9237 1.6360 TS	0.1691 S
2	 Uji_bj2	warna ASM CON COR VAR IDM ENT	0.2914 S	0.3707 0.7898 22.3534 0.9966 3294.7419 0.9234 TS	0.1763 S

3	 Uji_bj3	warna ASM CON COR VAR IDM ENT	0.2333 S	0.3409 0.5062 173.7099 0.9820 4749.1314 0.7899 3.7107 TS	0.3205 S
4	 Uji_bj4	warna ASM CON COR VAR IDM ENT	0.3596 0.4783 353.3386 0.9772 7562.2143 0.7796 4.0128 TS	0.3537 0.4786 354.7349 0.9771 7562.0924 0.7798 4.0095 TS	0.1917 S
5	 Uji_bj5	warna ASM CON COR VAR IDM ENT	0.2015 S	0.3240 S	0.1637 S

Ket :

S : sesuai

TS : Tidaksesuai







Dari hasil pengujian diatas, dapat menyimpulkan bahwa jika objek yang diproses masuk pada tahap tapis warna maka objek tersebut dilanjutkan pada tahap penapisan tekstur dan mendapatkan hasil nilai dari nilai ekstraksi tekstur (ASM, CON, COR, VAR, IDM, ENT). Dan jika objek tersebut tidak masuk pada tahap penapisan warna, maka objek tersebut tidak dilanjutkan pada tahap penapisan tekstur.







Hasil Pengujian

Jenis Objek	Sesuai (S)	Tidak Sesuai (TS)
S. Neval	20	0
S. Valencia	20	0
M. Santang	20	0
M. Ponkam	14	6
Bukan Jeruk	4	1

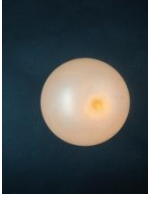




SET OF DATA

Data Acuan dengan 6 Ciri Tekstur













Jenis Jeruk	Nama Objek	Ekstraksi Ciri	Hasil Nilai (r)	Hasil Nilai (g)	Hasil Nilai (b)
JERUK MANDARIN	 acuan_MP2	Ekstraksi warna	0.3297	0.3628	0.3075
		ASM	0.7048	0.7039	0.6885
		CON	34.6549	37.7103	34.6187
		COR	0.9957	0.9953	0.9957
		VAR	3972.3134	3971.0055	3977.5276
		IDM	0.8793	0.8788	0.8710
		ENT	2.3288	2.3372	2.4918
	 acuan_MP12	Ekstraksi warna	0.3391	0.3645	0.2964
		ASM	0.6728	0.6725	0.8529
		CON	37.2272	38.0308	378.2032
		COR	0.9955	0.9954	0.8927
		VAR	4136.9367	4136.6006	1574.0713
		IDM	0.8609	0.8607	0.9316
		ENT	2.6386	2.6414	1.2839
	 acuan_MP46	Ekstraksi warna	0.3391	0.3638	0.3021
		ASM	0.6728	0.6839	0.6701
		CON	37.2272	41.9685	33.5254
		COR	0.9955	0.9950	0.9960
		VAR	4136.9367	4217.2057	4224.0977
		IDM	0.8609	0.8632	0.8563
		ENT	2.6386	2.5691	2.7099
 acuan_MS1	Ekstraksi warna	0.3391	0.3658	0.3303	
	ASM	0.8519	0.8508	0.8336	
	CON	22.2907	23.9965	31.0874	
	COR	0.9947	0.9943	0.9927	
	VAR	2104.8438	2105.0303	2115.2859	
	IDM	0.9374	0.9368	0.9286	
	ENT	1.2687	1.2790	1.4327	
 acuan_MS6	Ekstraksi warna	0.3391	0.3652	0.3294	
	ASM	0.8505	0.8498	0.8354	
	CON	22.1911	24.1694	27.4089	
	COR	0.9945	0.9940	0.9933	
	VAR	2017.5874	2017.2812	2028.6532	
	IDM	0.9355	0.9352	0.9282	
	ENT	1.2917	1.2980	1.4298	
 acuan_MS14	Ekstraksi warna	0.3062	0.3647	0.3291	
	ASM	0.8431	0.8415	0.8236	
	CON	22.4723	25.5352	35.4262	
	COR	0.9945	0.9938	0.9914	
	VAR	2038.1950	2038.3884	2049.4783	
	IDM	0.9346	0.9338	0.9250	
	ENT	1.3165	1.3311	1.4906	

JERUK SUNKIST		Ekstraksi warna	0. 3875	0. 3453	0. 2672
	acuan_SV5	ASM	0. 5228	0. 5222	0. 5107
		CON	29.8932	31.0962	25.0413
		COR	0. 9970	0. 9969	0. 9975
		VAR	5045.5592	5044.4937	5032.4616
		IDM	0. 8051	0. 8047	0. 7981
		ENT	3.6589	3.6659	3. 7908
		Ekstraksi warna	0. 3808	0. 3489	0. 2703
acuan_SV10	ASM	0. 4705	0. 4706	0. 7166	
	CON	31.5075	31. 8009	708.5312	
	COR	0. 9973	0. 9973	0. 8995	
	VAR	5796.7071	5796.6972	3169.2304	
	IDM	0. 7668	0. 7668	0. 8710	
	ENT	4.2410	4.2402	2.2675	
		Ekstraksi warna	0. 3846	0. 3462	0. 2692
acuan_SV8	ASM	0. 5013	0. 5014	0. 7887	
	CON	33.5433	33.9180	469.7571	
	COR	0. 9969	0. 9969	0. 9119	
	VAR	5389.5857	5389.4859	2430.5064	
	IDM	0. 7791	0. 7791	0. 9018	
	ENT	4.0151	4. 0145	1.7530	
		Ekstraksi warna	0. 3936	0. 3423	0. 2640
acuan_SN3	ASM	0. 4277	0. 4270	0. 4160	
	CON	27.0910	29.8296	24.3749	
	COR	0. 9969	0. 9966	0. 9972	
	VAR	4411.6888	4409.9113	4394.1658	
	IDM	0. 7617	0. 7611	0. 7540	
	ENT	4. 4412	4. 4494	4. 5823	
		Ekstraksi warna	0. 4116	0. 3335	0. 2549
acuan_SN6	ASM	0. 4242	0. 4219	0. 4145	
	CON	28.1259	30.7708	27.1016	
	COR	0. 9968	0. 9965	0. 9969	
	VAR	4344.2105	4340.2571	4328.8866	
	IDM	0. 7669	0. 7652	0. 7605	
	ENT	4. 3757	4. 4035	4. 4945	
		Ekstraksi warna	0. 3939	0. 3420	0. 2641
acuan_SN18	ASM	0. 4265	0. 9069	0. 4148	
	CON	28.1522	382.7918	25.4942	
	COR	0. 9968	0. 6342	0. 9971	
	VAR	4435.4497	331.7627	4417.8960	
	IDM	0. 7568	0. 9551	0. 7490	
	ENT	4. 4741	0.8002	4. 6142	












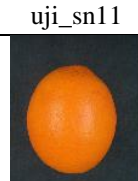


Data Pemanding (bukanjerukimpor) untuk Warna















BUKAN JERUK IMPOR	Nama Objek	Ciri Ekstraksi	Hasil Nilai(r)	Hasil Nilai(g)	Hasil Nilai(b)
	 <p>Bj3</p>	Ekstraksi warna	0.2914	0.3509	0.4114
	 <p>Bj14</p>	Ekstraksi warna	0.2963	0.3744	0.3293
	 <p>Bj24</p>	Ekstraksi warna	0.2977	0.3399	0.3624
	 <p>Bj32</p>	Ekstraksi warna	0.2914	0.3707	0.3378
	 <p>Bj33</p>	Ekstraksi warna	0.2913	0.3728	0.3359








Data Acuan dengan 3 Ciri Tekstur

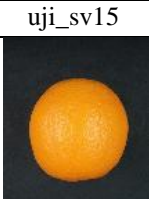

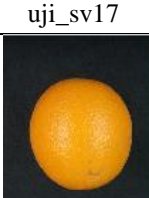



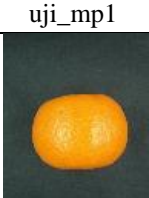
Jenis Jeruk	Nama Objek	Ciri Ekstraksi	Hasil Nilai	Jenis Jeruk	Nama Objek	Ciri Ekstraksi	Hasil Nilai
JERUK MANDARIN	 acuan_MP2	warna(r) ASM IDM ENT	0. 3297 0. 7048 0. 8793 2.3288	JERUK SUNKIST	 acuan_SV5	warna(r) ASM IDM ENT	0. 3875 0. 5228 0. 8051 3.6589
	 acuan_MP12	warna(r) ASM IDM ENT	0. 3391 0. 6728 0. 8609 2. 6386		 acuan_SV10	warna(r) ASM IDM ENT	0. 3808 0. 4705 0. 7668 4.2410
	 acuan_MP46	warna(r) ASM IDM ENT	0. 3391 0. 6728 0. 8609 2. 6386		 acuan_SV8	warna(r) ASM IDM ENT	0. 3846 0. 5013 0. 7791 4.0151
	 acuan_MS1	warna(r) ASM IDM ENT	0. 3391 0. 8519 0. 9374 1.2687		 acuan_SN3	warna(r) ASM IDM ENT	0. 3936 0. 4277 0. 7617 4. 4412
	 acuan_MS6	warna(r) ASM IDM ENT	0. 3391 0. 8505 0. 9355 1.2917		 acuan_SN6	warna(r) ASM IDM ENT	0. 4116 0. 4242 0. 7669 4. 3757
	 acuan_MS14	warna(r) ASM IDM ENT	0. 3062 0. 8431 0. 9346 1.3165		 acuan_SN18	warna(r) ASM IDM ENT	0. 3939 0. 4265 0. 7568 4. 4741








Data Ujidegan 3 CiriTekstur (pemanding)







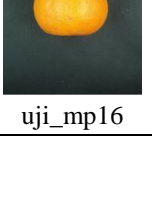
No.	Nama Objek	Ciri Ekstraksi	Hasil uji
1	 uji_sn1	warna(r) ASM IDM ENT	0.4051 0.4403 0.7761 4.3756 S
2	 uji_sn2	warna(r) ASM IDM ENT	0.4126 0.4283 0.7562 4.4613 S
3	 uji_sn3	warna(r) ASM IDM ENT	0.4051 0.4274 0.7558 4.4643 S
4	 uji_sn4	warna(r) ASM IDM ENT	0.3977 0.4258 0.7563 4.4760 S
5	 uji_sn5	warna(r) ASM IDM ENT	0.3992 0.4399 0.7701 4.3759 S
6	 uji_sn6	warna(r) ASM IDM ENT	0.3970 0.3896 0.7484 3.7550 S
7	 uji_sn7	warna(r) ASM IDM ENT	0.3973 0.4265 0.7568 4.4741 S
8	 uji_sn8	warna(r) ASM IDM ENT	0.4121 0.4285 0.7564 4.4637 S
9	 uji_sn9	warna(r) ASM IDM ENT	0.4112 0.3932 0.7359 4.8029 S
10	 uji_sn10	warna(r) ASM IDM ENT	0.4049 0.4268 0.7576 4.4620 S
11	 uji_sn11	warna(r) ASM IDM ENT	0.4045 0.3911 0.7415 4.8136 S
12	 uji_sn12	warna(r) ASM IDM ENT	0.4145 0.4257 0.7546 4.4519 S
13	 uji_sn13	warna(r) ASM IDM ENT	0.4102 0.3999 0.7383 4.7773 S
14	 uji_sn14	warna(r) ASM IDM ENT	0.3799 0.4266 0.7439 4.6372 S








15		warna(r) ASM IDM ENT	0. 4051 0. 4274 0. 7558 4.4643 S	22		warna(r) ASM IDM ENT	0. 3455 0. 5362 0. 8053 3.6675 S
	uji_sn15				uji_sv2		
16		warna(r) ASM IDM ENT	0. 3965 0. 3888 0. 7391 4.8108 S	23		warna(r) ASM IDM ENT	0. 3581 0. 4677 0. 7489 4. 3836 TS
	uji_sn16				uji_sv3		
17		warna(r) ASM IDM ENT	0. 3992 0. 4399 0. 7701 4.3759 S	24		warna(r) ASM IDM ENT	0. 3358 0. 5316 0. 7878 3. 8173 S
	uji_sn17				uji_sv4		
18		warna(r) ASM IDM ENT	0. 4051 0. 4403 0. 7761 4.3756 S	25		warna(r) ASM IDM ENT	0. 3561 0. 5092 0. 7777 3. 9807 S
	uji_sn18				uji_sv5		
19		warna(r) ASM IDM ENT	0. 4049 0. 4268 0. 7576 4.4620 S	26		warna(r) ASM IDM ENT	0. 3559 0. 4817 0. 7579 4.2484 S
	uji_sn19				uji_sv6		
20		warna(r) ASM IDM ENT	0. 4112 0. 3932 0. 7359 4. 8029 S	27		warna(r) ASM IDM ENT	0. 3562 0. 5072 0. 7810 3.9656 S
	uji_sn20				uji_sv7		
21		warna(r) ASM IDM ENT	0. 3449 0. 4835 0. 7682 4. 1905 S	28		warna(r) ASM IDM ENT	0. 3498 0. 4812 0. 7571 4. 2529 S
	uji_sv1				uji_sv8		



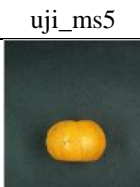




29		warna(r) ASM IDM ENT	0. 3551 0. 4790 0. 7591 4. 3021 S
	uji_sv9		
30		warna(r) ASM IDM ENT	0. 3447 0. 5184 0. 7739 4.0092 S
	uji_sv10		
31		warna(r) ASM IDM ENT	0. 3488 0. 4806 0. 7513 4. 3294 TS
	uji_sv11		
32		warna(r) ASM IDM ENT	0. 3437 0. 5298 0. 7562 4. 4613 S
	uji_sv12		
33		warna(r) ASM IDM ENT	0. 3588 0. 4683 0. 7462 4.4322 TS
	uji_sv13		
34		warna(r) ASM IDM ENT	0. 3560 0. 5089 0. 7715 4.0276 S
	uji_sv14		
35		warna(r) ASM IDM ENT	0. 3532 0. 4704 0. 7568 4.3161 S







	uji_sv15		
36		warna(r) ASM IDM ENT	0. 3558 0. 5078 0. 7748 4.0056 S
	uji_sv16		
37		warna(r) ASM IDM ENT	0. 3701 0. 4993 0. 7660 4.1622 S
	uji_sv17		
38		warna(r) ASM IDM ENT	0. 3445 0. 4833 0. 7612 4.2443 S
	uji_sv18		
39		warna(r) ASM IDM ENT	0. 3476 0. 4498 0.7609 4.3686 TS
	uji_sv19		
40		warna(r) ASM IDM ENT	0. 3606 0. 4772 0. 7480 4. 3517 TS
	uji_sv20		
41		warna(r) ASM IDM ENT	0. 3078 0. 6567 0. 8535 2.7756 S
	uji_mp1		
42		warna(r) ASM IDM ENT	0. 3407 0. 6444 0. 8413 2.8797 S
	uji_mp2		




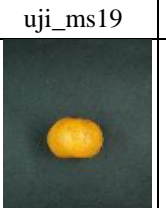
43		warna(r) ASM IDM ENT	0. 3150 0. 7092 0. 8788 2.3396 S
	uji_mp3		
44		warna(r) ASM IDM ENT	0. 3616 0. 6065 0. 8188 3.2593 TS
	uji_mp4		
45		warna(r) ASM IDM ENT	0. 3488 0. 6182 0. 8292 3.1236 S
	uji_mp5		
46		warna(r) ASM IDM ENT	0. 3213 0. 6844 0. 8734 2. 5015 S
	uji_mp6		
47		warna(r) ASM IDM ENT	0. 3115 0. 6863 0. 8654 2. 5470 S
	uji_mp7		
48		warna(r) ASM IDM ENT	0. 3697 0. 5883 0. 8103 3.3759 TS
	uji_mp8		
49		warna(r) ASM IDM ENT	0. 3167 0. 6818 0. 8545 2. 6416 S
	uji_mp9		






50		warna(r) ASM IDM ENT	0. 3111 0. 6767 0. 8623 2. 6147 S
	uji_mp10		
51		warna(r) ASM IDM ENT	0. 3149 0. 7094 0. 8744 2.3685 S
	uji_mp11		
52		warna(r) ASM IDM ENT	0. 3221 0. 6837 0. 8599 2. 5766 S
	uji_mp12		
53		warna(r) ASM IDM ENT	0. 3109 0. 6765 0. 8578 2.6504 S
	uji_mp13		
54		warna(r) ASM IDM ENT	0. 3127 0. 6856 0. 8621 2. 5745 S
	uji_mp14		
55		warna(r) ASM IDM ENT	0. 2973 TS
	uji_mp15		
56		warna(r) ASM IDM ENT	0. 3134 0. 7293 0. 8841 2. 2057 S
	uji_mp16		

57	 uji_mp17	warna(r) ASM IDM ENT	0. 3154 0. 7094 0. 8744 2.3685 S
58	 uji_mp18	warna(r) ASM IDM ENT	0. 3246 0. 6837 0. 8599 2. 5766 S
59	 uji_mp19	warna(r) ASM IDM ENT	0. 3080 0. 6765 0. 8578 2.6504 S
60	 uji_mp20	warna(r) ASM IDM ENT	0. 3183 0. 6856 0. 8621 2. 5745 S
61	 uji_ms1	warna(r) ASM IDM ENT	0. 3200 0. 8953 0. 9553 0.9179 S
62	 uji_ms2	warna(r) ASM IDM ENT	0. 2389 TS
63	 uji_ms3	warna(r) ASM IDM ENT	0. 2386 TS

64	 uji_ms4	warna(r) ASM IDM ENT	0. 2377 TS
65	 uji_ms5	warna(r) ASM IDM ENT	0. 2402 TS
66	 uji_ms6	warna(r) ASM IDM ENT	0. 2412 TS
67	 uji_ms7	warna(r) ASM IDM ENT	0. 2463 TS
68	 uji_ms8	warna(r) ASM IDM ENT	0. 2296 TS
69	 uji_ms9	warna(r) ASM IDM ENT	0. 2384 TS
70	 uji_ms10	warna(r) ASM IDM ENT	0. 3042 0. 8564 0. 9391 1.2267 S

71	 uji_ms11	warna(r) ASM IDM ENT	0.3040 0.8578 0.9396 1.2137 S
72	 uji_ms12	warna(r) ASM IDM ENT	0.3047 0.8645 0.9405 1.1831 TS
73	 uji_ms13	warna(r) ASM IDM ENT	0.3053 0.8500 0.9337 1.3135 S
74	 uji_ms14	warna(r) ASM IDM ENT	0.3061 0.8463 0.9359 1.2893
75	 uji_ms15	warna(r) ASM IDM ENT	0.3023 0.8638 0.9421 1.1735 S
76	 uji_ms16	warna(r) ASM IDM ENT	0.3009 0.8737 0.9453 1.1074 S

77	 uji_ms17	warna(r) ASM IDM ENT	0.3007 0.8602 0.9385 1.2271 S
78	 uji_ms18	warna(r) ASM IDM ENT	0.3004 0.8623 0.9414 1.1847 S
79	 uji_ms19	warna(r) ASM IDM ENT	0.3027 0.8524 0.9362 1.2702 S
80	 uji_ms20	warna(r) ASM IDM ENT	0.3025 0.8735 0.9456 1.1028 S

No.	Nama Objek	Ciri Ekstraksi	Hasil Nilai(r)
1	 Uji_bj1	warna ASM IDM ENT	0.2913 S
2	 Uji_bj2	warna ASM IDM ENT	0.2914 S
3	 Uji_bj3	warna ASM IDM ENT	0.2333 S
4	 Uji_bj4	warna ASM IDM ENT	0.3596 0.4783 0.7796 4.0128 TS
5	 Uji_bj5	warna ASM IDM ENT	0.2015 S

LAMPIRAN 2

Source Code untuk Warna

NilaikanalTiapwarna

```
a1 = imread('objek.jpg');
a2 = im2double(a1);
a3 = rgb2ycbcr(a1);
a4 = im2double(a3);
%PemisahanWarna RGB
R = a2(:,:,1);G = a2(:,:,2);B = a2(:,:,3);
figure,
subplot(221),imshow(a2),title('citra double (RGB)');
subplot(222),imshow(R), title('citra red');
subplot(223),imshow(G), title('citra green');
subplot(224),imshow(B), title('citra blue');
%Normalisasi RGB
b1=R+G+B;
r=R./b1;g=G./b1;b=B./b1;
figure,
subplot(221),imshow(r), title('Normalisasi red');
subplot(222),imshow(g), title('Normalisasi green');
subplot(223),imshow(b), title('Normalisasi blue');
meanR = mean2(r)
meanG = mean2(g)
meanB = mean2(b)
```

Range Warna

```
a1 = imread('objek.jpg');
a2 = im2double(a1);
%PemisahanWarna RGB
R = a2(:,:,1);G = a2(:,:,2);B = a2(:,:,3);
figure, imshow(a2),title('citra double (RGB)');
%Normalisasi RGB
b1=R+G+B;
r=R./b1;g=G./b1;b=B./b1;
% mengubahcitra RGB menjadicitra gray
gray = rgb2gray(a2);
figure, imshow(gray), title('citra Gray');
%range
mean_r = mean2(r);
fprintf('\n\tNilai_Warnamean_r :%13.4f\n',mean_r);
ifmean_r < 0.2980
msgbox('BukanMerupakanJenisJerukImpor')
else
ifmean_r > 0.2981
msgbox('MerupakanJenisJerukImpor')
end
end
```

Source Code untuk Tekstur

Range Tekstur

```
a1 = imread('objek.jpg');
a2 = im2double(a1);
a3 = rgb2gray(a1);

%PemisahanKanal RGB
R = a2(:,:,1); G = a2(:,:,2); B = a2(:,:,3);
figure, imshow(a2), title('Citra RGB');
figure,
subplot(221), imshow(R), title('Citra R');
subplot(222), imshow(G), title('Citra G');
subplot(223), imshow(B), title('Citra B');
subplot(224), imshow(a3), title('Citra RGB to Gray');

%Normalisasi RGB
b1=R+G+B;
r=R./b1; g=G./b1; b=B./b1;
figure,
subplot(221), imshow(r), title('Normalisasi r');
subplot(222), imshow(g), title('Normalisasi g');
subplot(223), imshow(b), title('Normalisasi b');

%Pendeteksi tepi (dT)
dT = edge(R, 'sobel');
figure, subplot(221), imshow(dT), title('DeteksiTepi');

%MORFOLOGI
%Proses Dilasi (penambahan piksel)
se90 = strel('line', 3, 90);
se0 = strel('line', 3, 0);
BWdil = imdilate(dT, [se90 se0]);
subplot(222), imshow(BWdil), title('MorfologiDilasi');
%Image Filling
BWfill = imfill(BWdil, 'holes');
figure, imshow(BWfill), title('Image Filling');

%Proses Erosi (pengurangan piksel)
seD = strel('disk', 1);
BWfin = imerode(BWfill, seD);
figure, imshow(BWfin), title('Menghilangkan Noise');

%Proses Segmentasi
[m,n] = size(BWfin);
idx = find(BWfin==1);
objek = zeros(m,n);
objek(idx) = a3(idx);
objek = uint8(objek);
figure, imshow(objek), title('Citra Segmentasi');

CiriOrdeA (objek)
```

Source Code untuk Function Co-Occurrence Matrix

ko000.m

```
function MatriksHasil=ko000 (GambarAsli)
GambarAsli=double (GambarAsli);
Temp=zeros (256);
[tinggi, lebar]=size (GambarAsli);
for i=1:tinggi
for j=1:lebar-1
p=GambarAsli (i, j)+1;
q=GambarAsli (i, j+1)+1;
Temp (p, q) = Temp (p, q)+1 ;
Temp (q, p) = Temp (q, p)+1 ;
end
end
JumlahPixel=sum (sum (Temp));
MatriksHasil=Temp/JumlahPixel;
```

ko045.m

```
function MatriksHasil=ko045 (GambarAsli)
GambarAsli=double (GambarAsli);
Temp=zeros (256);
[tinggi, lebar]=size (GambarAsli);
for i=2:tinggi
for j=1:lebar-1
p=GambarAsli (i, j)+1;
q=GambarAsli (i-1, j+1)+1;
Temp (p, q) = Temp (p, q)+1 ;
Temp (q, p) = Temp (q, p)+1 ;
end
end
JumlahPixel=sum (sum (Temp));
MatriksHasil=Temp/JumlahPixel;
```

ko090.m

```
function MatriksHasil=ko090 (GambarAsli)
GambarAsli=double (GambarAsli);
Temp=zeros (256);
[tinggi, lebar]=size (GambarAsli);
for i=2:tinggi
for j=1:lebar
p=GambarAsli (i, j)+1;
q=GambarAsli (i-1, j)+1;
Temp (p, q) = Temp (p, q)+1 ;
Temp (q, p) = Temp (q, p)+1 ;
end
end
JumlahPixel=sum (sum (Temp));
MatriksHasil=Temp/JumlahPixel;
```

ko135.m

```
function MatriksHasil=ko135 (GambarAsli)
GambarAsli=double (GambarAsli);
Temp=zeros (256);
[tinggi, lebar]=size (GambarAsli);
for i=2:tinggi
for j=2:lebar
p=GambarAsli (i, j)+1;
q=GambarAsli (i-1, j-1)+1;
Temp (p, q) = Temp (p, q)+1 ;
Temp (q, p) = Temp (q, p)+1 ;
end
end
JumlahPixel=sum (sum (Temp));
MatriksHasil=Temp/JumlahPixel;
```

CiriOrdeA.m

```
function CiriOrde (Citra)
mk000=ko000 (Citra);
mk045=ko045 (Citra);
mk090=ko090 (Citra);
mk135=ko135 (Citra);
MatKook=(mk000+mk045+mk090+mk135)/4;
I=[1:256];
SumX=sum (MatKook); SumY=sum (MatKook');
MeanX=SumX*I'; MeanY=SumY*I';
StdX=sqrt ((I-MeanX).^2*SumX');
StdY=sqrt ((I-MeanY).^2*SumY');
CiriASM=sum (sum (MatKook.^2));
CiriCON=0; CiriCOR=0; CiriVAR=0; CiriIDM=0; CiriENT=0;
for i=1:256
for j=1:256
TempCON = (i-j)*(i-j)*MatKook (i, j);
TempCOR = (i)*(j)*MatKook (i, j);
TempVAR = (i-MeanX)*(j-MeanY)*MatKook (i, j);
TempIDM = (MatKook (i, j))/(1+(i-j)*(i-j));
TempENT = -(MatKook (i, j))*(log2 (MatKook (i, j)+eps));
CiriCON = CiriCON + TempCON;
CiriCOR = CiriCOR + TempCOR;
CiriVAR = CiriVAR + TempVAR;
CiriIDM = CiriIDM + TempIDM;
CiriENT = CiriENT + TempENT;
end
end
CiriCOR=(CiriCOR-MeanX*MeanY)/(StdX*StdY);
fprintf ('\n\tASM :%13.4f\n', CiriASM);
fprintf (' \tCON :%13.4f\n', CiriCON);
fprintf (' \tCOR :%13.4f\n', CiriCOR);
fprintf (' \tVAR :%13.4f\n', CiriVAR);
fprintf (' \tIDM :%13.4f\n', CiriIDM);
fprintf (' \tENT :%13.4f\n', CiriENT);
```

CiriOrde.m

```
function CiriOrde(Citra)
mk000=ko000(Citra);
mk045=ko045(Citra);
mk090=ko090(Citra);
mk135=ko135(Citra);
MatKook=(mk000+mk045+mk090+mk135)/4;
I=[1:256];
SumX=sum(MatKook); SumY=sum(MatKook');
MeanX=SumX*I'; MeanY=SumY*I';
StdX=sqrt((I-MeanX).^2*SumX');
StdY=sqrt((I-MeanY).^2*SumY');
CiriASM=sum(sum(MatKook.^2));
CiriCON=0;CiriCOR=0;CiriVAR=0;CiriIDM=0;CiriENT=0;
for i=1:256
for j=1:256
TempCON = (i-j)*(i-j)*MatKook(i,j);
TempCOR = (i)*(j)*MatKook(i,j);
TempVAR = (i-MeanX)*(j-MeanY)*MatKook(i,j);
TempIDM = (MatKook(i,j))/(1+(i-j)*(i-j));
TempENT = -(MatKook(i,j))*(log2(MatKook(i,j)+eps));
CiriCON = CiriCON + TempCON;
CiriCOR = CiriCOR + TempCOR;
CiriVAR = CiriVAR + TempVAR;
CiriIDM = CiriIDM + TempIDM;
CiriENT = CiriENT + TempENT;
end
end
CiriCOR=(CiriCOR-MeanX*MeanY)/(StdX*StdY);
fprintf('\n\tASM :%13.4f\n',CiriASM);
fprintf(' \tCON :%13.4f\n',CiriCON);
fprintf(' \tCOR :%13.4f\n',CiriCOR);
fprintf(' \tVAR :%13.4f\n',CiriVAR);
fprintf(' \tIDM :%13.4f\n',CiriIDM);
fprintf(' \tENT :%13.4f\n',CiriENT);
%STANDARDISASI NILAI ACUAN JERUK VALENCIA
ASMV1 = 0.5229;
CONV1 = 29.7907;
CORV1 = 0.9971;
VARV1 = 5045.6866;
IDMV1 = 0.8051;
ENTV1 = 3.6577;
ASMV2 = 0.4706;
CONV2 = 31.6156;
CORV2 = 0.9973;
VARV2 = 5796.7502;
IDMV2 = 0.7668;
ENTV2 = 4.2403;
ASMV3 = 0.5014;
CONV3 = 33.6191;
CORV3 = 0.9969;
VARV3 = 5389.6039;
IDMV3 = 0.7791;
ENTV3 = 4.0146;
%STANDARDISASI NILAI ACUAN JERUK NAVEL
```

ASMN1 = 0.4278;
CONN1 = 27.0946;
CORN1 = 0.9969;
VARN1 = 4411.7844;
IDMN1 = 0.7617;
ENTN1 = 4.4403;
ASMN2 = 0.4243;
CONN2 = 28.0429;
CORN2 = 0.9968;
VARN2 = 4344.4061;
IDMN2 = 0.767;
ENTN2 = 4.3741;
ASMN3 = 0.4266;
CONN3 = 28.0735;
CORN3 = 0.9968;
VARN3 = 4435.6729;
IDMN3 = 0.7569;
ENTN3 = 4.4723;

%STANDARDISASI NILAI ACUAN JERUK PONKAM

ASMP1 = 0.705;
CONP1 = 34.7669;
CORP1 = 0.9956;
VARP1 = 3972.2121;
IDMP1 = 0.8794;
ENTP1 = 2.3271;
ASMP2 = 0.6729;
CONP2 = 37.2499;
CORP2 = 0.9955;
VARP2 = 4136.9148;
IDMP2 = 0.861;
ENTP2 = 2.6377;
ASMP3 = 0.6847;
CONP3 = 39.722;
CORP3 = 0.9953;
VARP3 = 4218.1869;
IDMP3 = 0.8636;
ENTP3 = 2.561;

%STANDARDISASI NILAI ACUAN JERUK SANTANG

ASMS1 = 0.852;
CONS1 = 22.2561;
CORS1 = 0.9947;
VAR1 = 2104.7755;
IDMS1 = 0.9375;
ENTS1 = 1.2677;
ASMS2 = 0.8506;
CONS2 = 22.1497;
CORS2 = 0.9945;
VAR2 = 2017.5898;
IDMS2 = 0.9356;
ENTS2 = 1.2914;
ASMS3 = 0.8432;
CONS3 = 22.4086;
CORS3 = 0.9945;
VAR3 = 2038.107;
IDMS3 = 0.9347;
ENTS3 = 1.3151;


```

% PERHITUNGAN JARAK EUCLIDEAN TERNORMALISASI
JV1 = ((CiriASM-ASMV1)^2+(CiriCON-CONV1)^2+(CiriCOR-
CORV1)^2+(CiriVAR-VARV1)^2+(CiriIDM-IDMV1)^2+(CiriENT-ENTV1)^2)
JV2 = ((CiriASM-ASMV2)^2+(CiriCON-CONV2)^2+(CiriCOR-
CORV2)^2+(CiriVAR-VARV2)^2+(CiriIDM-IDMV2)^2+(CiriENT-ENTV2)^2)
JV3 = ((CiriASM-ASMV3)^2+(CiriCON-CONV3)^2+(CiriCOR-
CORV3)^2+(CiriVAR-VARV3)^2+(CiriIDM-IDMV3)^2+(CiriENT-ENTV3)^2)
JP1 = ((CiriASM-ASMP1)^2+(CiriCON-CONP1)^2+(CiriCOR-
CORP1)^2+(CiriVAR-VARP1)^2+(CiriIDM-IDMP1)^2+(CiriENT-ENTP1)^2)
JP2 = ((CiriASM-ASMP2)^2+(CiriCON-CONP2)^2+(CiriCOR-
CORP2)^2+(CiriVAR-VARP2)^2+(CiriIDM-IDMP2)^2+(CiriENT-ENTP2)^2)
JP3 = ((CiriASM-ASMP3)^2+(CiriCON-CONP3)^2+(CiriCOR-
CORP3)^2+(CiriVAR-VARP3)^2+(CiriIDM-IDMP3)^2+(CiriENT-ENTP3)^2)
JN1 = ((CiriASM-ASMN1)^2+(CiriCON-CONN1)^2+(CiriCOR-
CORN1)^2+(CiriVAR-VARN1)^2+(CiriIDM-IDMN1)^2+(CiriENT-ENTN1)^2)
JN2 = ((CiriASM-ASMN2)^2+(CiriCON-CONN2)^2+(CiriCOR-
CORN2)^2+(CiriVAR-VARN2)^2+(CiriIDM-IDMN2)^2+(CiriENT-ENTN2)^2)
JN3 = ((CiriASM-ASMN3)^2+(CiriCON-CONN3)^2+(CiriCOR-
CORN3)^2+(CiriVAR-VARN3)^2+(CiriIDM-IDMN3)^2+(CiriENT-ENTN3)^2)
JS1 = ((CiriASM-ASMS1)^2+(CiriCON-CONS1)^2+(CiriCOR-
CORS1)^2+(CiriVAR-VARS1)^2+(CiriIDM-IDMS1)^2+(CiriENT-ENTS1)^2)
JS2 = ((CiriASM-ASMS2)^2+(CiriCON-CONS2)^2+(CiriCOR-
CORS2)^2+(CiriVAR-VARS2)^2+(CiriIDM-IDMS2)^2+(CiriENT-ENTS2)^2)
JS3 = ((CiriASM-ASMS3)^2+(CiriCON-CONS3)^2+(CiriCOR-
CORS3)^2+(CiriVAR-VARS3)^2+(CiriIDM-IDMS3)^2+(CiriENT-ENTS3)^2)
% PENAPISAN TEKSTUR (NILAI MINIMUM)
%Valencia
A = min (JV1, JV2);
B = min (A, JV3);
%Ponkam
C = min (JP1, JP2);
D = min (C, JP3);
%Navel
E = min (JN1, JN2);
F = min (E, JN3);
%Santang
G = min (JS1, JS2);
H = min (G, JS3);
%Sunkist dan Mandarin
S = min(B, F);
M = min(D, H);
% PENCOCOKAN CIRI TEKSTUR
if M < S
if H < D
msgbox('MerupakanJenisJeruk Mandarin Santang')
else
msgbox('MerupakanJenisJeruk Mandarin Ponkam')
end
else
if F < B
msgbox('MerupakanJenisJeruk Sunkist Navel')
else
msgbox('MerupakanJenisJeruk Sunkist Valencia')
end
end
end

```

Source Code tiapRumusPengujian

PemisahanKanal RGB

```
R = a2(:, :, 1); G = a2(:, :, 2); B = a2(:, :, 3);
```

Normalisasi RGB

```
b1=R+G+B;  
r=R./b1; g=G./b1; b=B./b1;
```

Jarak Euclidean

```
JV1 = ((CiriASM-ASMV1)^2+(CiriCON-CONV1)^2+(CiriCOR-  
CORV1)^2+(CiriVAR-VARV1)^2+(CiriIDM-IDMV1)^2+(CiriENT-ENTV1)^2)  
JV2 = ((CiriASM-ASMV2)^2+(CiriCON-CONV2)^2+(CiriCOR-  
CORV2)^2+(CiriVAR-VARV2)^2+(CiriIDM-IDMV2)^2+(CiriENT-ENTV2)^2)  
JV3 = ((CiriASM-ASMV3)^2+(CiriCON-CONV3)^2+(CiriCOR-  
CORV3)^2+(CiriVAR-VARV3)^2+(CiriIDM-IDMV3)^2+(CiriENT-ENTV3)^2)  
  
JP1 = ((CiriASM-ASMP1)^2+(CiriCON-CONP1)^2+(CiriCOR-  
CORP1)^2+(CiriVAR-VARP1)^2+(CiriIDM-IDMP1)^2+(CiriENT-ENTP1)^2)  
JP2 = ((CiriASM-ASMP2)^2+(CiriCON-CONP2)^2+(CiriCOR-  
CORP2)^2+(CiriVAR-VARP2)^2+(CiriIDM-IDMP2)^2+(CiriENT-ENTP2)^2)  
JP3 = ((CiriASM-ASMP3)^2+(CiriCON-CONP3)^2+(CiriCOR-  
CORP3)^2+(CiriVAR-VARP3)^2+(CiriIDM-IDMP3)^2+(CiriENT-ENTP3)^2)  
  
JN1 = ((CiriASM-ASMN1)^2+(CiriCON-CONN1)^2+(CiriCOR-  
CORN1)^2+(CiriVAR-VARN1)^2+(CiriIDM-IDMN1)^2+(CiriENT-ENTN1)^2)  
JN2 = ((CiriASM-ASMN2)^2+(CiriCON-CONN2)^2+(CiriCOR-  
CORN2)^2+(CiriVAR-VARN2)^2+(CiriIDM-IDMN2)^2+(CiriENT-ENTN2)^2)  
JN3 = ((CiriASM-ASMN3)^2+(CiriCON-CONN3)^2+(CiriCOR-  
CORN3)^2+(CiriVAR-VARN3)^2+(CiriIDM-IDMN3)^2+(CiriENT-ENTN3)^2)  
  
JS1 = ((CiriASM-ASMS1)^2+(CiriCON-CONS1)^2+(CiriCOR-  
CORS1)^2+(CiriVAR-VARS1)^2+(CiriIDM-IDMS1)^2+(CiriENT-ENTS1)^2)  
JS2 = ((CiriASM-ASMS2)^2+(CiriCON-CONS2)^2+(CiriCOR-  
CORS2)^2+(CiriVAR-VARS2)^2+(CiriIDM-IDMS2)^2+(CiriENT-ENTS2)^2)  
JS3 = ((CiriASM-ASMS3)^2+(CiriCON-CONS3)^2+(CiriCOR-  
CORS3)^2+(CiriVAR-VARS3)^2+(CiriIDM-IDMS3)^2+(CiriENT-ENTS3)^2)
```

Source Code Pengujian Sistem

```
a1 = imread('bj32.jpg');
a2 = im2double(a1);
a3 = rgb2gray(a1);
%PemisahanKanal RGB
R = a2(:,:,1); G = a2(:,:,2); B = a2(:,:,3);
figure,imshow(a2),title('Citra RGB');
figure,
subplot(221),imshow(R),title('Citra R');
subplot(222),imshow(G),title('Citra G');
subplot(223),imshow(B),title('Citra B');
subplot(224),imshow(a3),title('Citra RGB to Gray');
%Normalisasi RGB
b1=R+G+B;
r=R./b1; g=G./b1; b=B./b1;
figure,
subplot(221),imshow(r),title('Normalisasi r');
subplot(222),imshow(g),title('Normalisasi g');
subplot(223),imshow(b),title('Normalisasi b');
%Pendeteksit tepi (dT)
dT = edge(R, 'sobel');
figure,subplot(221), imshow(dT), title('DeteksiTepi');
%MORFOLOGI
%Proses Dilasi (penambahan piksel)
se90 = strel('line', 3, 90);
se0 = strel('line', 3, 0);
BWdil = imdilate(dT, [se90 se0]);
subplot(222), imshow(BWdil), title('MorfologiDilasi');
%Image Filling
BWfill = imfill(BWdil, 'holes');
figure, imshow(BWfill), title('Image Filling');
%Proses Erosi (pengurangan piksel)
seD = strel('disk',1);
BWfin = imerode(BWfill,seD);
figure, imshow(BWfin), title('Menghilangkan Noise');
%Proses Segmentasi
[m,n] = size(BWfin);
idx = find(BWfin==1);
objek = zeros(m,n);
objek(idx) = a3(idx);
objek = uint8(objek);
figure, imshow(objek), title('Citra Segmentasi');
imtool (objek);
%Nilai Mean
meanr = mean2(r);
fprintf(' \n\tNilai_Warnameanr :%13.4f\n',meanr);
ifmeanr< 0.2980
msgbox ('BukanMerupakanJenisJerukImpor')
else
CiriOrde(objek)
end
```