

ENSAYO DE SORTIVIDAD - 28 DÍAS-
0% REEMPLAZO DE AGREGADO GROSERO RECICLADO

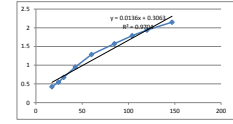
| Identificación de la muestra | | | | | | M1-1 | | M1-2 | | |
|--|---------|--------------|-------------|-------------|-------------|--|------------|------------|------------|---------|
| Diámetro (mm) | | | | | | 100.34 | 100.34 | 100.34 | 100.34 | |
| Masa Muestra seca (g) | | | | | | 879.1 | 879.1 | 879.1 | 879.1 | |
| Área exsuelta (mm ²) | | | | | | 8001.93408 | 8001.93408 | 8001.93408 | 8001.93408 | |
| Densidad del agua (g/cm ³) | | | | | | 0.001 | 0.001 | 0.001 | 0.001 | |
| Días | Minutos | Horas | Segundos | Bala 1 (lb) | Bala 1 (mm) | Masa (g) | f (mm) | Masa (g) | f (mm) | |
| 5 | 300 | 17.320581 | 2.2360798 | 882.5 | 0.42480728 | 877.6 | 0 | 877.6 | 0 | |
| 10 | 600 | 24.4948974 | 3.1622796 | 883.5 | 0.54880706 | 878.1 | 0.45031728 | 878.1 | 0.54292518 | |
| 15 | 900 | 31.82798135 | 4.0884326 | 884.5 | 0.67483461 | 878.1 | 0.64801528 | 878.1 | 0.84801528 | |
| 30 | 1800 | 42.4264069 | 5.4722558 | 886.7 | 0.94977038 | 881.2 | 0.95071200 | 881.2 | 0.95071200 | |
| 60 | 3600 | 60.71456669 | 7.7456669 | 889.4 | 1.28738881 | 883.9 | 1.28846499 | 883.9 | 1.28846499 | |
| 120 | 7200 | 84.8528137 | 10.954512 | 891.7 | 1.57461932 | 886.2 | 1.57618047 | 886.2 | 1.57618047 | |
| 180 | 10800 | 105.923048 | 15.4564079 | 893.4 | 1.79706796 | 887.8 | 1.77633938 | 887.8 | 1.77633938 | |
| 240 | 14400 | 120.15495334 | 20.9049533 | 894.6 | 1.9707111 | 889.1 | 1.93895317 | 889.1 | 1.93895317 | |
| 360 | 21600 | 146.963985 | 28.973668 | 896.3 | 2.14848824 | 890.8 | 2.15161144 | 890.8 | 2.15161144 | |
| 480 | 28800 | 176.3680769 | 37.9473219 | 897.5 | 2.30405228 | 897.6 | 2.30224620 | 897.6 | 2.30224620 | |
| 600 | 36000 | 210.619194 | 51.6656315 | 907.9 | 3.59912887 | 903.8 | 3.52764201 | 903.8 | 3.52764201 | |
| 720 | 43200 | 250.0011888 | 65.7267069 | 910.4 | 3.91155454 | 904.2 | 3.87786887 | 904.2 | 3.87786887 | |
| 840 | 50400 | 293.8775238 | 78.8046638 | 912.2 | 4.14649996 | 906 | 4.03263051 | 906 | 4.03263051 | |
| 960 | 57600 | 342.0000000 | 94.8528137 | 913.4 | 4.2984637 | 907.3 | 4.2156573 | 907.3 | 4.2156573 | |
| 1080 | 64800 | 394.5016400 | 113.8449533 | 914.3 | 4.39839513 | 908.2 | 4.32823462 | 908.2 | 4.32823462 | |
| 1200 | 72000 | 452.6048884 | 135.3910203 | 915.1 | 4.49891234 | 909 | 4.42831657 | 909 | 4.42831657 | |
| 1320 | 79200 | 516.384388 | 159.331263 | 915.6 | 4.56139724 | 909.6 | 4.50313778 | 909.6 | 4.50313778 | |
| 1440 | 86400 | 585.8181807 | 186.843996 | 916.3 | 4.64827600 | 910.3 | 4.59093817 | 910.3 | 4.59093817 | |
| 1560 | 93600 | 660.9291600 | 218.857062 | 916.9 | 4.698864 | 910.7 | 4.6409794 | 910.7 | 4.6409794 | |
| 1680 | 100800 | 741.84844 | 255.872692 | 917.2 | 4.72385796 | 911 | 4.6763599 | 911 | 4.6763599 | |
| 1800 | 108000 | 828.23376 | 298.453414 | 917.2 | 4.7411489 | 911.4 | 4.72854442 | 911.4 | 4.72854442 | |
| 1920 | 115200 | 920.113200 | 346.821051 | 917.4 | 4.7864285 | 911.6 | 4.7515652 | 911.6 | 4.7515652 | |
| 2040 | 122400 | 1017.091817 | 396.969151 | 917.2 | 4.7634881 | 911.4 | 4.72854442 | 911.4 | 4.72854442 | |
| 2160 | 129600 | 1119.41996 | 449.969185 | 917.1 | 4.74885192 | 911.4 | 4.72854442 | 911.4 | 4.72854442 | |
| 2280 | 136800 | 1227.0508 | 505.798338 | 917.4 | 4.78634261 | 911.6 | 4.7515652 | 911.6 | 4.7515652 | |
| Índice Inicial de Absorción de Agua | | | | | | S inicial (mm ³ /m ²) | 0.01360 | 0.01350 | 0.01360 | 0.01350 |
| S inicial (mm ³ /m ²) | | | | | | S inicial (mm ³ /m ²) | 0.10550 | 0.10430 | 0.00310 | 0.00310 |
| Tasa secundaria de Absorción de Agua | | | | | | S inicial (mm ³ /m ²) | 0.00310 | 0.00310 | 0.00310 | 0.00310 |
| S inicial (mm ³ /m ²) | | | | | | S inicial (mm ³ /m ²) | 0.02440 | 0.02400 | 0.02440 | 0.02400 |

M1-1

S inicial (mm³/m²)

Pendiente= 0.01360

| X | Y |
|----|--------|
| 1 | 0.3199 |
| 2 | 0.3335 |
| 3 | 0.3471 |
| 4 | 0.3607 |
| 5 | 0.3743 |
| 6 | 0.3879 |
| 7 | 0.4015 |
| 8 | 0.4151 |
| 9 | 0.4287 |
| 10 | 0.4423 |
| 11 | 0.4559 |
| 12 | 0.4695 |
| 13 | 0.4831 |
| 14 | 0.4967 |

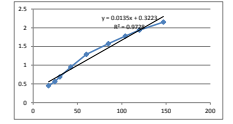


M1-2

S inicial (mm³/m²)

Pendiente= 0.01350

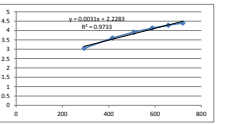
| X | Y |
|----|--------|
| 1 | 0.3358 |
| 2 | 0.3494 |
| 3 | 0.3628 |
| 4 | 0.3763 |
| 5 | 0.3898 |
| 6 | 0.4033 |
| 7 | 0.4168 |
| 8 | 0.4303 |
| 9 | 0.4438 |
| 10 | 0.4573 |
| 11 | 0.4708 |
| 12 | 0.4843 |
| 13 | 0.4978 |
| 14 | 0.5113 |



S Secundaria (mm³/m²)

Pendiente= 0.00310

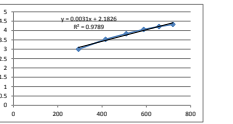
| X | Y |
|----|--------|
| 1 | 2.2314 |
| 2 | 2.2345 |
| 3 | 2.2376 |
| 4 | 2.2407 |
| 5 | 2.2438 |
| 6 | 2.2469 |
| 7 | 2.25 |
| 8 | 2.2531 |
| 9 | 2.2562 |
| 10 | 2.2593 |
| 11 | 2.2624 |
| 12 | 2.2655 |
| 13 | 2.2686 |
| 14 | 2.2717 |



S Secundaria (mm³/m²)

Pendiente= 0.00310

| X | Y |
|----|--------|
| 1 | 2.1857 |
| 2 | 2.1888 |
| 3 | 2.1919 |
| 4 | 2.195 |
| 5 | 2.1981 |
| 6 | 2.2012 |
| 7 | 2.2043 |
| 8 | 2.2074 |
| 9 | 2.2105 |
| 10 | 2.2136 |
| 11 | 2.2167 |
| 12 | 2.2198 |
| 13 | 2.2229 |
| 14 | 2.226 |

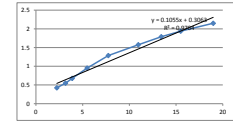


M1-1

S inicial (mm³/m²)

Pendiente= 0.10550

| X | Y |
|----|--------|
| 1 | 0.4118 |
| 2 | 0.5178 |
| 3 | 0.6228 |
| 4 | 0.7281 |
| 5 | 0.8338 |
| 6 | 0.9393 |
| 7 | 1.0448 |
| 8 | 1.1503 |
| 9 | 1.2558 |
| 10 | 1.3613 |
| 11 | 1.4668 |
| 12 | 1.5723 |
| 13 | 1.6778 |
| 14 | 1.7833 |

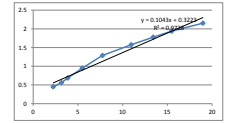


M1-2

S inicial (mm³/m²)

Pendiente= 0.10430

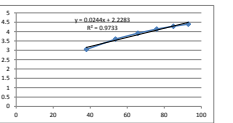
| X | Y |
|----|--------|
| 1 | 0.4266 |
| 2 | 0.5309 |
| 3 | 0.6352 |
| 4 | 0.7395 |
| 5 | 0.8438 |
| 6 | 0.9481 |
| 7 | 1.0524 |
| 8 | 1.1567 |
| 9 | 1.261 |
| 10 | 1.3653 |
| 11 | 1.4696 |
| 12 | 1.5739 |
| 13 | 1.6782 |
| 14 | 1.7825 |



S Secundaria (mm³/m²)

Pendiente= 0.02440

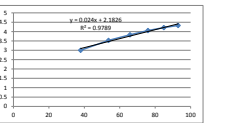
| X | Y |
|----|--------|
| 1 | 2.2527 |
| 2 | 2.2771 |
| 3 | 2.3015 |
| 4 | 2.3259 |
| 5 | 2.3503 |
| 6 | 2.3747 |
| 7 | 2.3991 |
| 8 | 2.4235 |
| 9 | 2.4479 |
| 10 | 2.4723 |
| 11 | 2.4967 |
| 12 | 2.5211 |
| 13 | 2.5455 |
| 14 | 2.5699 |



S Secundaria (mm³/m²)

Pendiente= 0.02400

| X | Y |
|----|--------|
| 1 | 2.2066 |
| 2 | 2.2306 |
| 3 | 2.2546 |
| 4 | 2.2786 |
| 5 | 2.3026 |
| 6 | 2.3266 |
| 7 | 2.3506 |
| 8 | 2.3746 |
| 9 | 2.3986 |
| 10 | 2.4226 |
| 11 | 2.4466 |
| 12 | 2.4706 |
| 13 | 2.4946 |
| 14 | 2.5186 |

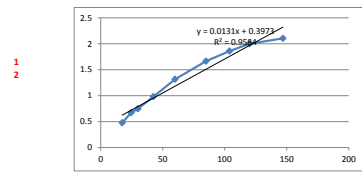


ENSAYO DE SORTIVIDAD - 28 DÍAS-
20% REEMPLAZO DE AGREGADO GRUESO RECICLADO

| Identificación de la muestra | | | | | M2-1 | M2-2 | | | |
|--|---------|-------|----------|------------|------------------------------------|------------|------------|----------|------------|
| Diámetro (mm) | | | | | 99.31 | 99.45 | | | |
| Masa Muestra seca (g) | | | | | 832.2 | 823.5 | | | |
| Área expuesta (mm ²) | | | | | 7745.58063 | 7768.21596 | | | |
| Densidad del agua (g/mm ³) | | | | | 0.001 | 0.001 | | | |
| Días | Minutos | Horas | Segundos | Raiz t (s) | Raiz t (min) | Masa (g) | l (mm) | Masa (g) | l (mm) |
| | 5 | | 300 | 17.3205081 | 2.23606798 | 832.2 | 0 | 823.5 | 0 |
| | 10 | | 600 | 24.4948974 | 3.16227766 | 835.9 | 0.47769175 | 827.5 | 0.51491874 |
| | 15 | | 900 | 30 | 3.87298335 | 837.4 | 0.67135057 | 828.4 | 0.63077546 |
| | 30 | | 1800 | 42.4264069 | 5.47722558 | 838 | 0.7488141 | 829.3 | 0.74663218 |
| | 60 | 1 | 3600 | 60 | 7.74596669 | 839.8 | 0.98120468 | 831.5 | 1.02983749 |
| | 120 | 2 | 7200 | 84.8528137 | 10.954512 | 842.4 | 1.31687997 | 834.4 | 1.40315358 |
| | 180 | 3 | 10800 | 103.923048 | 13.4164079 | 845.1 | 1.6646585 | 837 | 1.73785076 |
| | 240 | 4 | 14400 | 120 | 15.4919334 | 846.6 | 1.85912467 | 838.7 | 1.95659122 |
| | 360 | 6 | 21600 | 146.969385 | 18.973666 | 847.7 | 2.00114113 | 840.1 | 2.13691278 |
| 1 | 1440 | 24 | 86400 | 293.938769 | 37.9473319 | 848.5 | 2.10442584 | 841.8 | 2.35575325 |
| 2 | 2880 | 48 | 172800 | 415.692194 | 53.6656315 | 855 | 2.94361405 | 848.4 | 3.20536918 |
| 3 | 4320 | 72 | 259200 | 509.116882 | 65.7267069 | 857.9 | 3.3180211 | 851.9 | 3.65592308 |
| 4 | 5760 | 96 | 345600 | 587.877538 | 75.8946638 | 859.9 | 3.57623286 | 853.9 | 3.91382425 |
| 5 | 7200 | 120 | 432000 | 657.267069 | 84.8528137 | 861.1 | 3.73155921 | 855.2 | 4.08073104 |
| 6 | 8640 | 144 | 518400 | 720 | 92.9516003 | 862.7 | 3.93772933 | 856.8 | 4.28669854 |
| 7 | 10080 | 168 | 604800 | 777.688884 | 100.399203 | 863.4 | 4.02810344 | 857.4 | 4.36393635 |
| 8 | 11520 | 192 | 691200 | 831.384388 | 107.331263 | 863.9 | 4.09265638 | 857.8 | 4.41542822 |
| 9 | 12960 | 216 | 777600 | 881.816307 | 113.841996 | 864.4 | 4.15720932 | 858.4 | 4.49266603 |
| 10 | 14400 | 240 | 864000 | 929.516003 | 120 | 864.9 | 4.22176226 | 858.8 | 4.54415791 |
| 11 | 15840 | 264 | 950400 | 974.884609 | 125.857062 | 865.2 | 4.26049403 | 859 | 4.56903885 |
| 12 | 17280 | 288 | 1036800 | 1018.23376 | 131.453414 | 865.5 | 4.29922579 | 859.3 | 4.60852275 |
| 13 | 18720 | 312 | 1123200 | 1059.8113 | 136.821051 | 865.8 | 4.33795755 | 859.7 | 4.66001463 |
| 14 | 20160 | 336 | 1209600 | 1099.81817 | 141.985915 | 866.1 | 4.37668932 | 859.6 | 4.64714166 |
| 15 | 21600 | 360 | 1296000 | 1138.41996 | 146.969385 | 865.7 | 4.32504696 | 859.5 | 4.64714166 |
| 16 | 23040 | 384 | 1382400 | 1175.75508 | 151.789328 | 865.9 | 4.35086814 | 859.7 | 4.66001463 |
| Índice Inicial de Absorción de Agua | | | | | S Inicial (mm/s ^{1/2}) | 0.01310 | 0.01470 | 0.01310 | 0.01470 |
| | | | | | S Inicial (mm/min ^{1/2}) | 0.01040 | 0.11430 | 0.00230 | 0.00250 |
| Tasa secundaria de Absorción de Agua | | | | | S Inicial (mm/s ^{1/2}) | 0.00230 | 0.00250 | | |
| | | | | | S Inicial (mm/min ^{1/2}) | 0.01820 | 0.01950 | | |

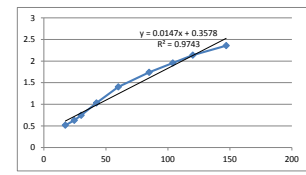
M2-1
S Inicial (mm/s^{1/2}) Pendiente= 0.01310

| x | y |
|----|--------|
| 1 | 0.4104 |
| 2 | 0.4235 |
| 3 | 0.4366 |
| 4 | 0.4497 |
| 5 | 0.4628 |
| 6 | 0.4759 |
| 7 | 0.489 |
| 8 | 0.5021 |
| 9 | 0.5152 |
| 10 | 0.5283 |
| 11 | 0.5414 |
| 12 | 0.5545 |
| 13 | 0.5676 |
| 14 | 0.5807 |



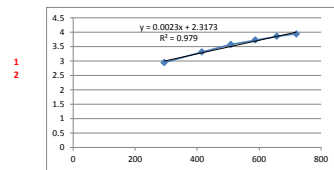
M2-2
S Inicial (mm/s^{1/2}) Pendiente= 0.01470

| x | y |
|----|--------|
| 1 | 0.3725 |
| 2 | 0.3872 |
| 3 | 0.4019 |
| 4 | 0.4166 |
| 5 | 0.4313 |
| 6 | 0.446 |
| 7 | 0.4607 |
| 8 | 0.4754 |
| 9 | 0.4901 |
| 10 | 0.5048 |
| 11 | 0.5195 |
| 12 | 0.5342 |
| 13 | 0.5489 |
| 14 | 0.5636 |



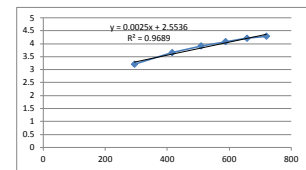
M2-1
S Secundaria (mm/s^{1/2}) Pendiente= 0.00230

| x | y |
|----|--------|
| 1 | 2.3196 |
| 2 | 2.3219 |
| 3 | 2.3242 |
| 4 | 2.3265 |
| 5 | 2.3288 |
| 6 | 2.3311 |
| 7 | 2.3334 |
| 8 | 2.3357 |
| 9 | 2.338 |
| 10 | 2.3403 |
| 11 | 2.3426 |
| 12 | 2.3449 |
| 13 | 2.3472 |
| 14 | 2.3495 |



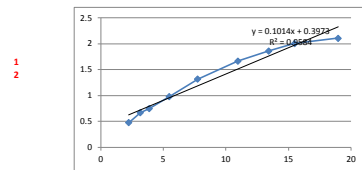
M2-2
S Secundaria (mm/s^{1/2}) Pendiente= 0.00250

| x | y |
|----|--------|
| 1 | 2.5561 |
| 2 | 2.5586 |
| 3 | 2.5611 |
| 4 | 2.5636 |
| 5 | 2.5661 |
| 6 | 2.5686 |
| 7 | 2.5711 |
| 8 | 2.5736 |
| 9 | 2.5761 |
| 10 | 2.5786 |
| 11 | 2.5811 |
| 12 | 2.5836 |
| 13 | 2.5861 |
| 14 | 2.5886 |



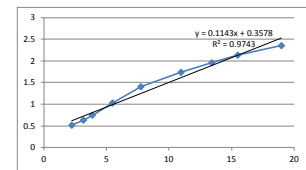
M2-1
S Inicial (mm/m^{1/2}) Pendiente= 0.01040

| x | y |
|----|--------|
| 1 | 0.4987 |
| 2 | 0.6001 |
| 3 | 0.7015 |
| 4 | 0.8029 |
| 5 | 0.9043 |
| 6 | 1.0057 |
| 7 | 1.1071 |
| 8 | 1.2085 |
| 9 | 1.3099 |
| 10 | 1.4113 |
| 11 | 1.5127 |
| 12 | 1.6141 |
| 13 | 1.7155 |
| 14 | 1.8169 |



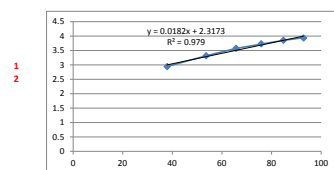
M2-2
S Inicial (mm/m^{1/2}) Pendiente= 0.011430

| x | y |
|----|--------|
| 1 | 0.4721 |
| 2 | 0.5864 |
| 3 | 0.7007 |
| 4 | 0.815 |
| 5 | 0.9293 |
| 6 | 1.0436 |
| 7 | 1.1579 |
| 8 | 1.2722 |
| 9 | 1.3865 |
| 10 | 1.5008 |
| 11 | 1.6151 |
| 12 | 1.7294 |
| 13 | 1.8437 |
| 14 | 1.958 |



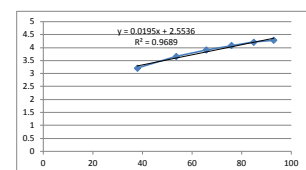
M2-1
S Secundaria (mm/m^{1/2}) Pendiente= 0.01820

| x | y |
|----|--------|
| 1 | 2.3355 |
| 2 | 2.3537 |
| 3 | 2.3719 |
| 4 | 2.3901 |
| 5 | 2.4083 |
| 6 | 2.4265 |
| 7 | 2.4447 |
| 8 | 2.4629 |
| 9 | 2.4811 |
| 10 | 2.4993 |
| 11 | 2.5175 |
| 12 | 2.5357 |
| 13 | 2.5539 |
| 14 | 2.5721 |



M2-2
S Secundaria (mm/m^{1/2}) Pendiente= 0.01950

| x | y |
|----|--------|
| 1 | 2.5731 |
| 2 | 2.5926 |
| 3 | 2.6121 |
| 4 | 2.6316 |
| 5 | 2.6511 |
| 6 | 2.6706 |
| 7 | 2.6901 |
| 8 | 2.7096 |
| 9 | 2.7291 |
| 10 | 2.7486 |
| 11 | 2.7681 |
| 12 | 2.7876 |
| 13 | 2.8071 |
| 14 | 2.8266 |

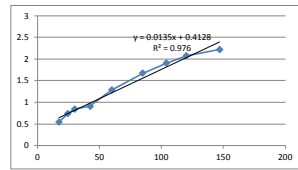


**ENSAYO DE SORTIVIDAD - 28 DÍAS-
40% REEMPLAZO DE AGREGADO GRUESO RECICLADO**

| Identificación de la muestra | | | | | | M3-1 | M3-2 | | | |
|--|---------|-------|----------|------------|--------------|------------------------------------|------------|----------|------------|---------|
| Diámetro (mm) | | | | | | 99.09 | 99.23 | | | |
| Masa Muestra seca (g) | | | | | | 825 | 815.6 | | | |
| Área expuesta (mm ²) | | | | | | 7712.07869 | 7732.71665 | | | |
| Densidad del agua (g/mm ³) | | | | | | 0.001 | 0.001 | | | |
| Días | Minutos | Horas | Segundos | Raíz t (s) | Raíz t (min) | Masa (g) | l (mm) | Masa (g) | l (mm) | |
| | 5 | | 300 | 17.3205081 | 2.3606798 | 825 | 0 | 815.6 | 0 | |
| | 10 | | 600 | 24.4948974 | 3.16227766 | 830.7 | 0.73910034 | 821.9 | 0.81472014 | |
| | 15 | | 900 | 30 | 3.87298335 | 831.5 | 0.84283372 | 822.6 | 0.9052446 | |
| | 30 | | 1800 | 42.4264069 | 5.47722558 | 832 | 0.90766709 | 824.9 | 1.20268211 | |
| | 60 | 1 | 3600 | 60 | 7.74596669 | 834.9 | 1.2837006 | 828 | 1.60357615 | |
| | 120 | 2 | 7200 | 84.8528137 | 10.9544512 | 837.9 | 1.67270078 | 831.5 | 2.05619845 | |
| | 180 | 3 | 10800 | 103.923048 | 13.41540799 | 839.7 | 1.90610088 | 833.7 | 2.3407039 | |
| | 240 | 4 | 14400 | 120 | 15.4919334 | 841 | 2.07466763 | 835.1 | 2.52175282 | |
| | 360 | 6 | 21600 | 146.969385 | 18.973666 | 842.1 | 2.21730103 | 836.1 | 2.65107348 | |
| 1 | 1440 | 24 | 86400 | 293.938769 | 37.9473319 | 851 | 3.3713349 | 845 | 3.80202733 | |
| 2 | 2880 | 48 | 172800 | 415.692194 | 53.6656315 | 856.2 | 4.04560188 | 849.7 | 4.40983442 | |
| 3 | 4320 | 72 | 259200 | 509.116882 | 65.7267069 | 859.6 | 4.48846875 | 852.8 | 4.81072845 | |
| 4 | 5760 | 96 | 345600 | 587.877338 | 75.8946638 | 861.9 | 4.78470222 | 854.9 | 5.08230183 | |
| 5 | 7200 | 120 | 432000 | 657.267069 | 84.8528137 | 863.9 | 5.04403567 | 856.6 | 5.30214695 | |
| 6 | 8640 | 144 | 518400 | 720 | 92.9516003 | 865.3 | 5.22556909 | 857.9 | 5.47026381 | |
| 7 | 10080 | 168 | 604800 | 777.688884 | 100.399203 | 866.6 | 5.39413583 | 858.9 | 5.59958446 | |
| 8 | 11520 | 192 | 691200 | 831.384388 | 107.331263 | 867.5 | 5.51083589 | 859.8 | 5.71597305 | |
| 9 | 12960 | 216 | 777600 | 881.816307 | 113.841996 | 868.4 | 5.62753594 | 860.5 | 5.80649751 | |
| 10 | 14400 | 240 | 864000 | 929.516003 | 120 | 869.1 | 5.71830265 | 861.1 | 5.88408991 | |
| 11 | 15840 | 264 | 950400 | 974.884609 | 125.857062 | 869.5 | 5.77016934 | 861.6 | 5.94875024 | |
| 12 | 17280 | 288 | 1036800 | 1018.23376 | 131.453414 | 869.9 | 5.82203603 | 861.8 | 5.97461437 | |
| 13 | 18720 | 312 | 1123200 | 1059.8113 | 136.821051 | 870.4 | 5.88686694 | 862.3 | 6.0392747 | |
| 14 | 20160 | 336 | 1209600 | 1099.81817 | 141.985915 | 870.6 | 5.91280274 | 862.6 | 6.07807089 | |
| 15 | 21600 | 360 | 1296000 | 1138.41996 | 146.969385 | 870.6 | 5.91280274 | 860.7 | 5.83236165 | |
| 16 | 23040 | 384 | 1382400 | 1175.75508 | 151.789326 | 870.7 | 5.92576941 | 860.8 | 5.84529371 | |
| Índice Inicial de Absorción de Agua | | | | | | S Inicial (mm/s ^{1/2}) | 0.01350 | 0.01650 | 0.01350 | 0.01650 |
| | | | | | | S Inicial (mm/min ^{1/2}) | 0.10420 | 0.12810 | 0.00430 | 0.00390 |
| Tasa secundaria de Absorción de Agua | | | | | | S Inicial (mm/s ^{1/2}) | 0.00430 | 0.00390 | | |
| | | | | | | S Inicial (mm/min ^{1/2}) | 0.03360 | 0.03020 | | |

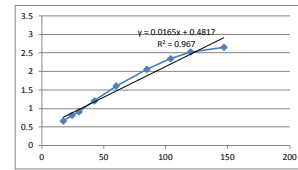
M3-1
S Inicial (mm/s^{1/2}) Pendiente= 0.01350

| X | Y |
|----|--------|
| 1 | 0.4263 |
| 2 | 0.4398 |
| 3 | 0.4533 |
| 4 | 0.4668 |
| 5 | 0.4803 |
| 6 | 0.4938 |
| 7 | 0.5073 |
| 8 | 0.5208 |
| 9 | 0.5343 |
| 10 | 0.5478 |
| 11 | 0.5613 |
| 12 | 0.5748 |
| 13 | 0.5883 |
| 14 | 0.6018 |



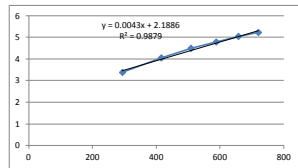
M3-2
S Inicial (mm/min^{1/2}) Pendiente= 0.01650

| X | Y |
|----|--------|
| 1 | 0.4982 |
| 2 | 0.5147 |
| 3 | 0.5312 |
| 4 | 0.5477 |
| 5 | 0.5642 |
| 6 | 0.5807 |
| 7 | 0.5972 |
| 8 | 0.6137 |
| 9 | 0.6302 |
| 10 | 0.6467 |
| 11 | 0.6632 |
| 12 | 0.6797 |
| 13 | 0.6962 |
| 14 | 0.7127 |



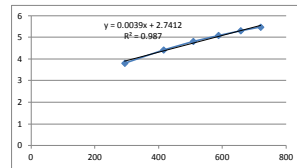
S Secundaria (mm/s^{1/2}) Pendiente= 0.00430

| X | Y |
|----|--------|
| 1 | 2.1929 |
| 2 | 2.1972 |
| 3 | 2.2015 |
| 4 | 2.2058 |
| 5 | 2.2101 |
| 6 | 2.2144 |
| 7 | 2.2187 |
| 8 | 2.223 |
| 9 | 2.2273 |
| 10 | 2.2316 |
| 11 | 2.2359 |
| 12 | 2.2402 |
| 13 | 2.2445 |
| 14 | 2.2488 |



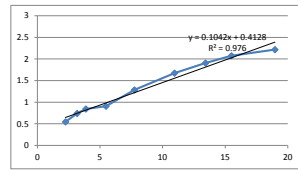
S Secundaria (mm/min^{1/2}) Pendiente= 0.00390

| X | Y |
|----|--------|
| 1 | 2.7451 |
| 2 | 2.749 |
| 3 | 2.7529 |
| 4 | 2.7568 |
| 5 | 2.7607 |
| 6 | 2.7646 |
| 7 | 2.7685 |
| 8 | 2.7724 |
| 9 | 2.7763 |
| 10 | 2.7802 |
| 11 | 2.7841 |
| 12 | 2.788 |
| 13 | 2.7919 |
| 14 | 2.7958 |



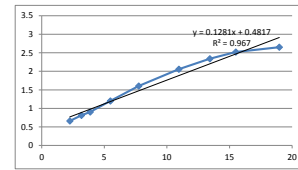
M3-1
S Inicial (mm/min^{1/2}) Pendiente= 0.10420

| X | Y |
|----|--------|
| 1 | 0.517 |
| 2 | 0.6212 |
| 3 | 0.7254 |
| 4 | 0.8296 |
| 5 | 0.9338 |
| 6 | 1.038 |
| 7 | 1.1422 |
| 8 | 1.2464 |
| 9 | 1.3506 |
| 10 | 1.4548 |
| 11 | 1.559 |
| 12 | 1.6632 |
| 13 | 1.7674 |
| 14 | 1.8716 |



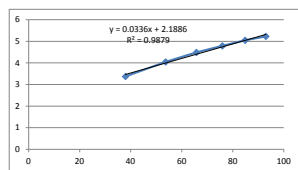
M3-2
S Inicial (mm/min^{1/2}) Pendiente= 0.12810

| X | Y |
|----|--------|
| 1 | 0.6098 |
| 2 | 0.7379 |
| 3 | 0.866 |
| 4 | 0.9941 |
| 5 | 1.1222 |
| 6 | 1.2503 |
| 7 | 1.3784 |
| 8 | 1.5065 |
| 9 | 1.6346 |
| 10 | 1.7627 |
| 11 | 1.8908 |
| 12 | 2.0189 |
| 13 | 2.147 |
| 14 | 2.2751 |



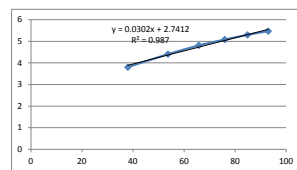
S Secundaria (mm/s^{1/2}) Pendiente= 0.03360

| X | Y |
|----|--------|
| 1 | 2.2222 |
| 2 | 2.2558 |
| 3 | 2.2894 |
| 4 | 2.323 |
| 5 | 2.3566 |
| 6 | 2.3902 |
| 7 | 2.4238 |
| 8 | 2.4574 |
| 9 | 2.491 |
| 10 | 2.5246 |
| 11 | 2.5582 |
| 12 | 2.5918 |
| 13 | 2.6254 |
| 14 | 2.659 |



S Secundaria (mm/min^{1/2}) Pendiente= 0.03020

| X | Y |
|----|--------|
| 1 | 2.7714 |
| 2 | 2.8016 |
| 3 | 2.8318 |
| 4 | 2.862 |
| 5 | 2.8922 |
| 6 | 2.9224 |
| 7 | 2.9526 |
| 8 | 2.9828 |
| 9 | 3.013 |
| 10 | 3.0432 |
| 11 | 3.0734 |
| 12 | 3.1036 |
| 13 | 3.1338 |
| 14 | 3.164 |

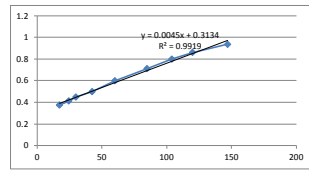


**ENSAYO DE SORTIVIDAD - 56 DÍAS-
0% REEMPLAZO DE AGREGADO GRUESO RECICLADO**

| Identificación de la muestra | | | | | | M1-1 | M1-2 | | | |
|--|---------|-------|----------|------------|--------------|------------------------------------|------------|----------|------------|---------|
| Diámetro (mm) | | | | | | 100.99 | 102.49 | | | |
| Masa Muestra seca (g) | | | | | | 884.5 | 889.8 | | | |
| Área expuesta (mm ²) | | | | | | 8010.65683 | 8249.17453 | | | |
| Densidad del agua (g/mm ³) | | | | | | 0.001 | 0.001 | | | |
| Días | Minutos | Horas | Segundos | Raiz t (s) | Raiz t (min) | Masa (g) | l (mm) | Masa (g) | l (mm) | |
| | 5 | | 300 | 17.3205081 | 2.23606798 | 884.5 | 0 | 889.8 | 0 | |
| | 10 | | 600 | 24.4948974 | 3.16227766 | 887.8 | 0.37450113 | 892.8 | 0.36357275 | |
| | 15 | | 900 | 30 | 3.87298335 | 888.1 | 0.44940135 | 893.2 | 0.40004003 | |
| | 30 | | 1800 | 42.4264069 | 5.47722558 | 888.5 | 0.49933483 | 894 | 0.50914185 | |
| | 60 | 1 | 3600 | 60 | 7.74596669 | 889.3 | 0.5992018 | 894.7 | 0.59399883 | |
| | 120 | 2 | 7200 | 84.8528137 | 10.95454512 | 890.2 | 0.71155214 | 895.5 | 0.65097823 | |
| | 180 | 3 | 10800 | 103.923048 | 13.4164079 | 890.9 | 0.79893573 | 896 | 0.75159035 | |
| | 240 | 4 | 14400 | 120 | 15.4919334 | 891.4 | 0.86135259 | 896.5 | 0.81220248 | |
| | 360 | 6 | 21600 | 146.969385 | 18.973666 | 892 | 0.93625281 | 896.9 | 0.86069218 | |
| 1 | 1440 | 24 | 86400 | 293.938769 | 37.9473319 | 895.6 | 1.38565416 | 901.1 | 1.36983403 | |
| 2 | 2880 | 48 | 172800 | 415.692194 | 53.6656315 | 897.8 | 1.66028832 | 903.4 | 1.64864981 | |
| 3 | 4320 | 72 | 259200 | 509.116882 | 65.7267069 | 899.3 | 1.84753889 | 905.1 | 1.85473103 | |
| 4 | 5760 | 96 | 345600 | 587.873538 | 75.8946638 | 900.3 | 1.97237259 | 905.2 | 1.98807771 | |
| 5 | 7200 | 120 | 432000 | 657.267069 | 84.8528137 | 901.2 | 2.08472293 | 907.2 | 2.10930196 | |
| 6 | 8640 | 144 | 518400 | 720 | 92.9516003 | 901.9 | 2.17210653 | 907.9 | 2.19415893 | |
| 7 | 10080 | 168 | 604800 | 777.688884 | 100.399203 | 902.4 | 2.23452338 | 908.6 | 2.27901591 | |
| 8 | 11520 | 192 | 691200 | 831.384388 | 107.331263 | 903 | 2.30942361 | 909.2 | 2.35175046 | |
| 9 | 12960 | 216 | 777600 | 881.816307 | 113.841996 | 903.5 | 2.37184046 | 909.8 | 2.42446501 | |
| 10 | 14400 | 240 | 864000 | 929.516003 | 120 | 904 | 2.43425732 | 910.3 | 2.48509714 | |
| 11 | 15840 | 264 | 950400 | 974.884609 | 125.857062 | 904.4 | 2.4841908 | 910.7 | 2.53358684 | |
| 12 | 17280 | 288 | 1036800 | 1018.23376 | 131.453414 | 904.6 | 2.50915754 | 911 | 2.56995411 | |
| 13 | 18720 | 312 | 1123200 | 1059.8113 | 136.821051 | 905.2 | 2.58405777 | 911.5 | 2.63056624 | |
| 14 | 20160 | 336 | 1209600 | 1099.81817 | 141.985915 | 905.5 | 2.62150788 | 911.7 | 2.65481109 | |
| 15 | 21600 | 360 | 1296000 | 1138.41996 | 146.969385 | 905.2 | 2.58405777 | 911.6 | 2.64268866 | |
| 16 | 23040 | 384 | 1382400 | 1175.75508 | 151.789328 | 905.4 | 2.60902451 | 911.8 | 2.66939351 | |
| Índice Inicial de Absorción de Agua | | | | | | S Inicial (mm/s ^{1/2}) | 0.00450 | 0.00400 | 0.00450 | 0.00400 |
| | | | | | | S Inicial (mm/min ^{1/2}) | 0.03470 | 0.03120 | 0.00180 | 0.00190 |
| Tasa secundaria de Absorción de Agua | | | | | | S Inicial (mm/s ^{1/2}) | 0.00180 | 0.00190 | | |
| | | | | | | S Inicial (mm/min ^{1/2}) | 0.01420 | 0.01500 | | |

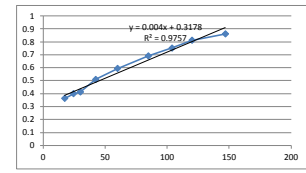
M1-1
S Inicial (mm/s^{1/2}) Pendiente= 0.00450

| x | y |
|----|--------|
| 1 | 0.3179 |
| 2 | 0.3224 |
| 3 | 0.3269 |
| 4 | 0.3314 |
| 5 | 0.3359 |
| 6 | 0.3404 |
| 7 | 0.3449 |
| 8 | 0.3494 |
| 9 | 0.3539 |
| 10 | 0.3584 |
| 11 | 0.3629 |
| 12 | 0.3674 |
| 13 | 0.3719 |
| 14 | 0.3764 |



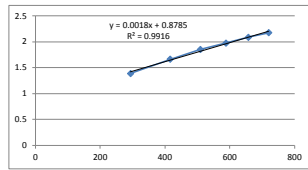
M1-2
S Inicial (mm/s^{1/2}) Pendiente= 0.00400

| x | y |
|----|--------|
| 1 | 0.3218 |
| 2 | 0.3258 |
| 3 | 0.3298 |
| 4 | 0.3338 |
| 5 | 0.3378 |
| 6 | 0.3418 |
| 7 | 0.3458 |
| 8 | 0.3498 |
| 9 | 0.3538 |
| 10 | 0.3578 |
| 11 | 0.3618 |
| 12 | 0.3658 |
| 13 | 0.3698 |
| 14 | 0.3738 |



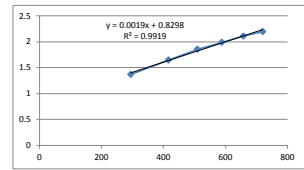
S Secundaria (mm/s^{1/2}) Pendiente= 0.00180

| x | y |
|----|--------|
| 1 | 0.8803 |
| 2 | 0.8821 |
| 3 | 0.8839 |
| 4 | 0.8857 |
| 5 | 0.8875 |
| 6 | 0.8893 |
| 7 | 0.8911 |
| 8 | 0.8929 |
| 9 | 0.8947 |
| 10 | 0.8965 |
| 11 | 0.8983 |
| 12 | 0.9001 |
| 13 | 0.9019 |
| 14 | 0.9037 |



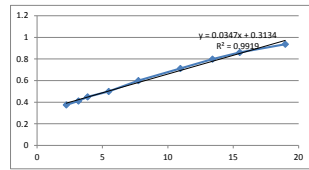
S Secundaria (mm/s^{1/2}) Pendiente= 0.00190

| x | y |
|----|--------|
| 1 | 0.8317 |
| 2 | 0.8336 |
| 3 | 0.8355 |
| 4 | 0.8374 |
| 5 | 0.8393 |
| 6 | 0.8412 |
| 7 | 0.8431 |
| 8 | 0.845 |
| 9 | 0.8469 |
| 10 | 0.8488 |
| 11 | 0.8507 |
| 12 | 0.8526 |
| 13 | 0.8545 |
| 14 | 0.8564 |



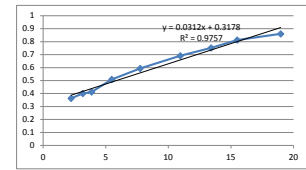
M1-1
S Inicial (mm/m^{1/2}) Pendiente= 0.03470

| x | y |
|----|--------|
| 1 | 0.3481 |
| 2 | 0.3828 |
| 3 | 0.4175 |
| 4 | 0.4522 |
| 5 | 0.4869 |
| 6 | 0.5216 |
| 7 | 0.5563 |
| 8 | 0.591 |
| 9 | 0.6257 |
| 10 | 0.6604 |
| 11 | 0.6951 |
| 12 | 0.7298 |
| 13 | 0.7645 |
| 14 | 0.7992 |



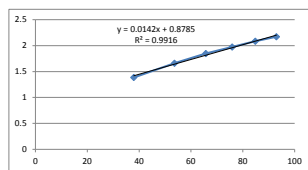
M1-2
S Inicial (mm/m^{1/2}) Pendiente= 0.03120

| x | y |
|----|--------|
| 1 | 0.349 |
| 2 | 0.3802 |
| 3 | 0.4114 |
| 4 | 0.4426 |
| 5 | 0.4738 |
| 6 | 0.505 |
| 7 | 0.5362 |
| 8 | 0.5674 |
| 9 | 0.5986 |
| 10 | 0.6298 |
| 11 | 0.661 |
| 12 | 0.6922 |
| 13 | 0.7234 |
| 14 | 0.7546 |



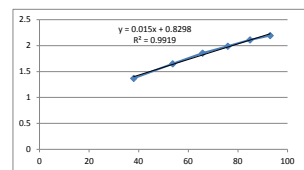
S Secundaria (mm/m^{1/2}) Pendiente= 0.01420

| x | y |
|----|--------|
| 1 | 0.8927 |
| 2 | 0.9069 |
| 3 | 0.9211 |
| 4 | 0.9353 |
| 5 | 0.9495 |
| 6 | 0.9637 |
| 7 | 0.9779 |
| 8 | 0.9921 |
| 9 | 1.0063 |
| 10 | 1.0205 |
| 11 | 1.0347 |
| 12 | 1.0489 |
| 13 | 1.0631 |
| 14 | 1.0773 |



S Secundaria (mm/m^{1/2}) Pendiente= 0.01500

| x | y |
|----|--------|
| 1 | 0.8448 |
| 2 | 0.8598 |
| 3 | 0.8748 |
| 4 | 0.8898 |
| 5 | 0.9048 |
| 6 | 0.9198 |
| 7 | 0.9348 |
| 8 | 0.9498 |
| 9 | 0.9648 |
| 10 | 0.9798 |
| 11 | 0.9948 |
| 12 | 1.0098 |
| 13 | 1.0248 |
| 14 | 1.0398 |

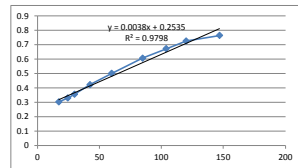


ENSAYO DE SORTIVIDAD - 56 DÍAS-
20% REEMPLAZO DE AGREGADO GRUESO RECICLADO

| Identificación de la muestra | | | | M2-1 | M2-2 | | | | |
|--|---------|-------|----------|------------------------------------|--------------|----------|------------|----------|------------|
| Diámetro (mm) | | | | 98.30 | 101.52 | | | | |
| Masa Muestra seca (g) | | | | 827.2 | 856.7 | | | | |
| Área expuesta (mm ²) | | | | 7589.21606 | 8094.95593 | | | | |
| Densidad del agua (g/mm ³) | | | | 0.001 | 0.001 | | | | |
| Días | Minutos | Horas | Segundos | Raíz t (s) | Raíz t (min) | Masa (g) | l (mm) | Masa (g) | l (mm) |
| | 5 | | 300 | 17.3205081 | 2.23606798 | 827.2 | 0 | 856.7 | 0 |
| | 10 | | 600 | 24.4948974 | 3.16227766 | 829.7 | 0.30306161 | 858.9 | 0.24706744 |
| | 15 | | 900 | 30 | 3.87298335 | 829.9 | 0.35576797 | 859 | 0.28412755 |
| | 30 | | 1800 | 42.4264069 | 5.47722558 | 830.4 | 0.42165093 | 859.5 | 0.34589441 |
| | 60 | 1 | 3600 | 60 | 7.74596669 | 831 | 0.50071048 | 860.1 | 0.42001464 |
| | 120 | 2 | 7200 | 84.8528137 | 10.9544512 | 831.8 | 0.60612321 | 860.7 | 0.49413487 |
| | 180 | 3 | 10800 | 103.923048 | 13.41640799 | 832.3 | 0.67200617 | 861.2 | 0.55590173 |
| | 240 | 4 | 14400 | 120 | 15.4919334 | 832.7 | 0.72471253 | 861.6 | 0.60531522 |
| | 360 | 6 | 21600 | 146.969385 | 18.973666 | 833 | 0.76424231 | 861.9 | 0.64237533 |
| 1 | 1440 | 24 | 86400 | 293.938769 | 37.9473319 | 835.8 | 1.13318687 | 864.7 | 0.98826974 |
| 2 | 2880 | 48 | 172800 | 415.692194 | 53.6656315 | 837.5 | 1.35718893 | 866.2 | 1.17357032 |
| 3 | 4320 | 72 | 259200 | 509.116882 | 65.7267069 | 838.7 | 1.51530803 | 867.2 | 1.29710403 |
| 4 | 5760 | 96 | 345600 | 587.877538 | 75.8946638 | 839.5 | 1.62072076 | 867.9 | 1.38357764 |
| 5 | 7200 | 120 | 432000 | 657.267069 | 84.8528137 | 840.3 | 1.72613340 | 868.5 | 1.45769787 |
| 6 | 8640 | 144 | 518400 | 720 | 92.9516003 | 840.9 | 1.80519304 | 869.1 | 1.5318181 |
| 7 | 10080 | 168 | 604800 | 777.688884 | 100.399203 | 841.4 | 1.871076 | 869.6 | 1.59358496 |
| 8 | 11520 | 192 | 691200 | 831.384388 | 107.331263 | 842 | 1.95013555 | 870 | 1.64299844 |
| 9 | 12960 | 216 | 777600 | 881.816307 | 113.841996 | 842.4 | 2.00284191 | 870.3 | 1.68005856 |
| 10 | 14400 | 240 | 864000 | 929.516003 | 120 | 842.8 | 2.05554828 | 870.7 | 1.72947205 |
| 11 | 15840 | 264 | 950400 | 974.884609 | 125.857062 | 843.2 | 2.10825464 | 871 | 1.76653216 |
| 12 | 17280 | 288 | 1036800 | 1018.23376 | 131.453414 | 843.4 | 2.13460783 | 871.3 | 1.80359228 |
| 13 | 18720 | 312 | 1123200 | 1059.8113 | 136.821051 | 843.7 | 2.1741376 | 871.5 | 1.82829902 |
| 14 | 20160 | 336 | 1209600 | 1099.81817 | 141.985915 | 843.8 | 2.18731419 | 871.5 | 1.82829902 |
| 15 | 21600 | 360 | 1296000 | 1138.41996 | 146.969385 | 843.5 | 2.14778442 | 871.1 | 1.77888553 |
| 16 | 23040 | 384 | 1382400 | 1176.75508 | 151.789326 | 843.6 | 2.16096101 | 871.2 | 1.7912389 |
| Índice Inicial de Absorción de Agua | | | | S Inicial (mm/s ^{1/2}) | 0.00380 | 0.00320 | 0.00380 | 0.00320 | |
| | | | | S Inicial (mm/min ^{1/2}) | 0.02950 | 0.02510 | 0.00160 | 0.00130 | |
| Tasa secundaria de Absorción de Agua | | | | S Inicial (mm/s ^{1/2}) | 0.00160 | 0.00130 | | | |
| | | | | S Inicial (mm/min ^{1/2}) | 0.01220 | 0.00970 | | | |

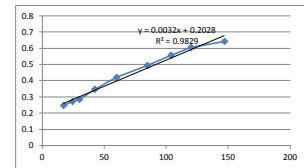
M2-1
S Inicial (mm/s^{1/2}) Pendiente= 0.00380

| X | Y |
|----|--------|
| 1 | 0.2573 |
| 2 | 0.2611 |
| 3 | 0.2649 |
| 4 | 0.2687 |
| 5 | 0.2725 |
| 6 | 0.2763 |
| 7 | 0.2801 |
| 8 | 0.2839 |
| 9 | 0.2877 |
| 10 | 0.2915 |
| 11 | 0.2953 |
| 12 | 0.2991 |
| 13 | 0.3029 |
| 14 | 0.3067 |



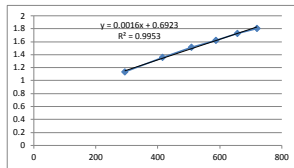
M2-2
S Inicial (mm/s^{1/2}) Pendiente= 0.00320

| X | Y |
|----|--------|
| 1 | 0.206 |
| 2 | 0.2092 |
| 3 | 0.2124 |
| 4 | 0.2156 |
| 5 | 0.2188 |
| 6 | 0.222 |
| 7 | 0.2252 |
| 8 | 0.2284 |
| 9 | 0.2316 |
| 10 | 0.2348 |
| 11 | 0.238 |
| 12 | 0.2412 |
| 13 | 0.2444 |
| 14 | 0.2476 |



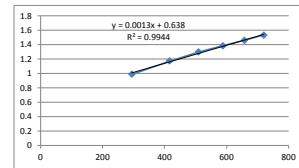
S Secundaria (mm/s^{1/2}) Pendiente= 0.00160

| X | Y |
|----|--------|
| 1 | 0.6939 |
| 2 | 0.6955 |
| 3 | 0.6971 |
| 4 | 0.6987 |
| 5 | 0.7003 |
| 6 | 0.7019 |
| 7 | 0.7035 |
| 8 | 0.7051 |
| 9 | 0.7067 |
| 10 | 0.7083 |
| 11 | 0.7099 |
| 12 | 0.7115 |
| 13 | 0.7131 |
| 14 | 0.7147 |



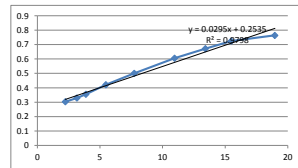
S Secundaria (mm/s^{1/2}) Pendiente= 0.00130

| X | Y |
|----|--------|
| 1 | 0.6393 |
| 2 | 0.6406 |
| 3 | 0.6419 |
| 4 | 0.6432 |
| 5 | 0.6445 |
| 6 | 0.6458 |
| 7 | 0.6471 |
| 8 | 0.6484 |
| 9 | 0.6497 |
| 10 | 0.651 |
| 11 | 0.6523 |
| 12 | 0.6536 |
| 13 | 0.6549 |
| 14 | 0.6562 |



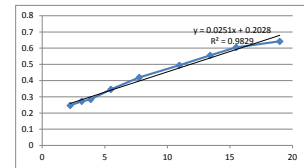
M2-1
S Inicial (mm/m^{1/2}) Pendiente= 0.02950

| X | Y |
|----|--------|
| 1 | 0.283 |
| 2 | 0.3125 |
| 3 | 0.342 |
| 4 | 0.3715 |
| 5 | 0.401 |
| 6 | 0.4305 |
| 7 | 0.46 |
| 8 | 0.4895 |
| 9 | 0.519 |
| 10 | 0.5485 |
| 11 | 0.578 |
| 12 | 0.6075 |
| 13 | 0.637 |
| 14 | 0.6665 |



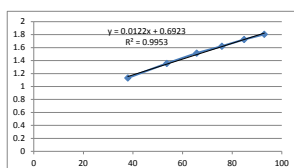
M2-2
S Inicial (mm/m^{1/2}) Pendiente= 0.02510

| X | Y |
|----|--------|
| 1 | 0.2279 |
| 2 | 0.253 |
| 3 | 0.2781 |
| 4 | 0.3032 |
| 5 | 0.3283 |
| 6 | 0.3534 |
| 7 | 0.3785 |
| 8 | 0.4036 |
| 9 | 0.4287 |
| 10 | 0.4538 |
| 11 | 0.4789 |
| 12 | 0.504 |
| 13 | 0.5291 |
| 14 | 0.5542 |



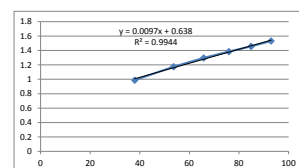
S Secundaria (mm/m^{1/2}) Pendiente= 0.01220

| X | Y |
|----|--------|
| 1 | 0.7045 |
| 2 | 0.7167 |
| 3 | 0.7289 |
| 4 | 0.7411 |
| 5 | 0.7533 |
| 6 | 0.7655 |
| 7 | 0.7777 |
| 8 | 0.7899 |
| 9 | 0.8021 |
| 10 | 0.8143 |
| 11 | 0.8265 |
| 12 | 0.8387 |
| 13 | 0.8509 |
| 14 | 0.8631 |



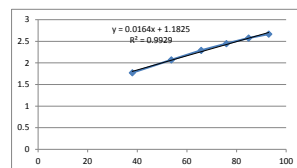
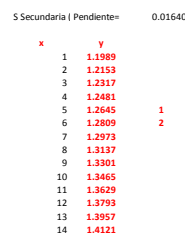
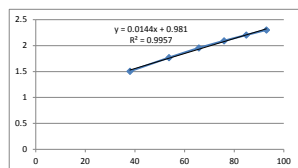
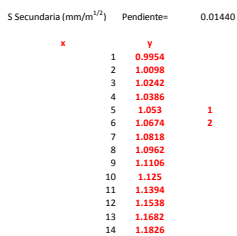
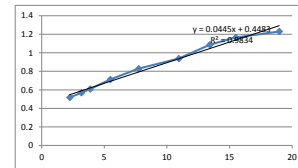
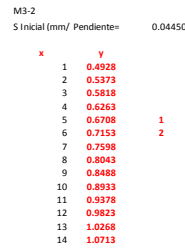
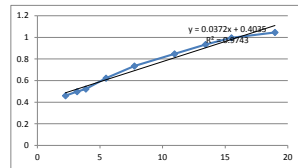
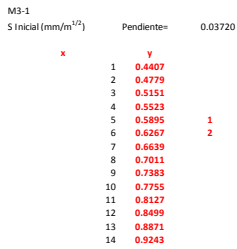
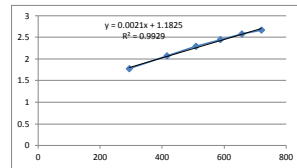
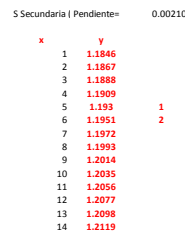
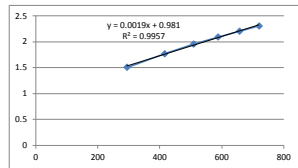
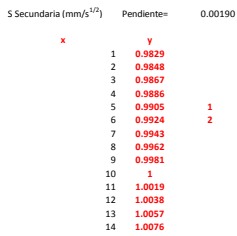
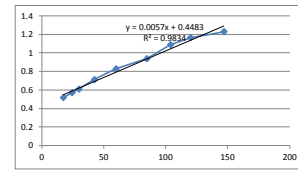
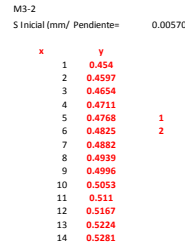
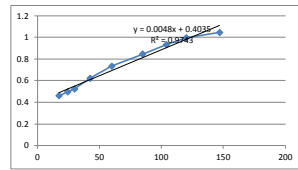
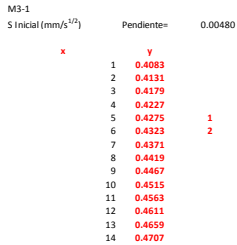
S Secundaria (mm/m^{1/2}) Pendiente= 0.00970

| X | Y |
|----|--------|
| 1 | 0.6477 |
| 2 | 0.6574 |
| 3 | 0.6671 |
| 4 | 0.6768 |
| 5 | 0.6865 |
| 6 | 0.6962 |
| 7 | 0.7059 |
| 8 | 0.7156 |
| 9 | 0.7253 |
| 10 | 0.735 |
| 11 | 0.7447 |
| 12 | 0.7544 |
| 13 | 0.7641 |
| 14 | 0.7738 |



ENSAYO DE SORTIVIDAD - 56 DÍAS-
40% REEMPLAZO DE AGREGADO GRUESO RECICLADO

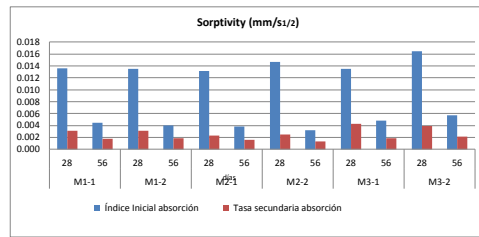
| Identificación de la muestra | | | | | | M3-1 | M3-2 | | | |
|--|---------|-------|----------|------------|--------------|------------------------------------|------------|----------|------------|---------|
| Diámetro (mm) | | | | | | 101.15 | 99.19 | | | |
| Masa Muestra seca (g) | | | | | | 854.7 | 805.2 | | | |
| Área expuesta (mm ²) | | | | | | 8035.26469 | 7726.48341 | | | |
| Densidad del agua (g/mm ³) | | | | | | 0.001 | 0.001 | | | |
| Días | Minutos | Horas | Segundos | Raíz t (s) | Raíz t (min) | Masa (g) | l (mm) | Masa (g) | l (mm) | |
| | 5 | | 300 | 17.3205081 | 2.23606798 | 854.7 | 0 | 805.2 | 0 | |
| | 10 | | 600 | 24.4948974 | 3.16227766 | 858.4 | 0.46047021 | 809.2 | 0.51769094 | |
| | 15 | | 900 | 30 | 3.87298335 | 858.9 | 0.52269591 | 809.9 | 0.60829743 | |
| | 30 | | 1800 | 42.4264069 | 5.47722558 | 859.7 | 0.62225704 | 810.7 | 0.71183742 | |
| | 60 | 1 | 3600 | 60 | 7.74596669 | 860.6 | 0.7342633 | 811.6 | 0.8283199 | |
| | 120 | 2 | 7200 | 84.8528137 | 10.9544512 | 861.5 | 0.84626957 | 812.44 | 0.93703689 | |
| | 180 | 3 | 10800 | 103.923048 | 13.41640799 | 862.2 | 0.93338556 | 813.6 | 1.08716987 | |
| | 240 | 4 | 14400 | 120 | 15.4919334 | 862.7 | 0.99561126 | 814.2 | 1.16482486 | |
| | 360 | 6 | 21600 | 146.969385 | 18.973666 | 863.1 | 1.04539182 | 814.7 | 1.22953736 | |
| 1 | 1440 | 24 | 86400 | 293.938769 | 37.9473319 | 866.8 | 1.50586203 | 818.9 | 1.77312229 | |
| 2 | 2880 | 48 | 172800 | 415.692194 | 53.6656315 | 868.9 | 1.76720999 | 821.2 | 2.07079976 | |
| 3 | 4320 | 72 | 259200 | 509.116882 | 65.7670969 | 870.4 | 1.95388711 | 822.9 | 2.29082223 | |
| 4 | 5760 | 96 | 345600 | 587.877538 | 75.8946638 | 871.5 | 2.09078365 | 824.1 | 2.44613222 | |
| 5 | 7200 | 120 | 432000 | 657.267069 | 84.8528137 | 872.4 | 2.20278991 | 825.1 | 2.5755572 | |
| 6 | 8640 | 144 | 518400 | 720 | 92.9516003 | 873.2 | 2.30235104 | 825.8 | 2.66615469 | |
| 7 | 10080 | 168 | 604800 | 777.688884 | 100.399203 | 873.8 | 2.37702188 | 826.6 | 2.76969468 | |
| 8 | 11520 | 192 | 691200 | 831.384388 | 107.331263 | 874.5 | 2.46413787 | 827.3 | 2.86029217 | |
| 9 | 12960 | 216 | 777600 | 881.816307 | 113.841996 | 875 | 2.52636357 | 827.9 | 2.93794716 | |
| 10 | 14400 | 240 | 864000 | 929.516003 | 120 | 875.5 | 2.58858928 | 828.4 | 3.00256965 | |
| 11 | 15840 | 264 | 950400 | 974.884609 | 125.857062 | 875.8 | 2.6259247 | 828.8 | 3.05442965 | |
| 12 | 17280 | 288 | 1036800 | 1018.23376 | 131.453414 | 876 | 2.65081498 | 829.1 | 3.09325714 | |
| 13 | 18720 | 312 | 1123200 | 1059.8113 | 136.821051 | 876.4 | 2.70059554 | 829.6 | 3.15796963 | |
| 14 | 20160 | 336 | 1209600 | 1099.81817 | 141.985915 | 876.6 | 2.72548582 | 829.9 | 3.19679713 | |
| 15 | 21600 | 360 | 1296000 | 1138.41996 | 146.969385 | 876.5 | 2.71304068 | 829.8 | 3.18385463 | |
| 16 | 23040 | 384 | 1382400 | 1176.75508 | 151.789326 | 876.6 | 2.72548582 | 829.9 | 3.19679713 | |
| Índice Inicial de Absorción de Agua | | | | | | S Inicial (mm/s ^{1/2}) | 0.00480 | 0.00570 | 0.00480 | 0.00570 |
| | | | | | | S Inicial (mm/min ^{1/2}) | 0.03720 | 0.04450 | 0.00190 | 0.00210 |
| Tasa secundaria de Absorción de Agua | | | | | | S Inicial (mm/s ^{1/2}) | 0.00190 | 0.00210 | | |
| | | | | | | S Inicial (mm/min ^{1/2}) | 0.01440 | 0.01640 | | |



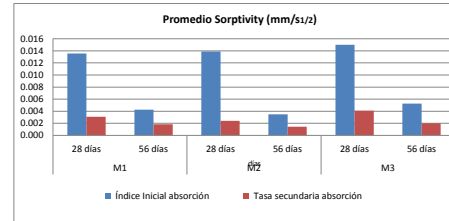
| EDAD | M1-1 | | M1-2 | | M2-1 | | M2-2 | | M3-1 | | M3-2 | |
|---------|----------------------------------|-------------------------------------|----------------------------------|-------------------------------------|----------------------------------|-------------------------------------|----------------------------------|-------------------------------------|----------------------------------|-------------------------------------|----------------------------------|-------------------------------------|
| | S Inicial (mm/s ^{1/2}) | S Secundaria (mm/s ^{1/2}) | S Inicial (mm/s ^{1/2}) | S Secundaria (mm/s ^{1/2}) | S Inicial (mm/s ^{1/2}) | S Secundaria (mm/s ^{1/2}) | S Inicial (mm/s ^{1/2}) | S Secundaria (mm/s ^{1/2}) | S Inicial (mm/s ^{1/2}) | S Secundaria (mm/s ^{1/2}) | S Inicial (mm/s ^{1/2}) | S Secundaria (mm/s ^{1/2}) |
| 28 días | 0.0136 | 0.0031 | 0.0135 | 0.0031 | 0.0131 | 0.0023 | 0.0147 | 0.0025 | 0.0135 | 0.0043 | 0.0165 | 0.0039 |
| 56 días | 0.0045 | 0.0018 | 0.004 | 0.0019 | 0.0038 | 0.0016 | 0.0032 | 0.0013 | 0.0048 | 0.0019 | 0.0057 | 0.0021 |

0.0045 0.004
0.0018 0.0019

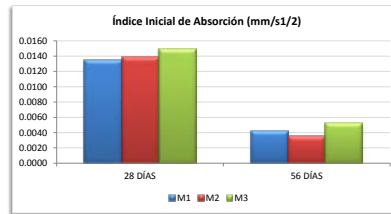
| | M1-1 | | M1-2 | | M2-1 | | M2-2 | | M3-1 | | M3-2 | |
|---------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | 28 | 56 | 28 | 56 | 28 | 56 | 28 | 56 | 28 | 56 | 28 | 56 |
| Índice Inicial absorción | 0.0136 | 0.0045 | 0.0135 | 0.004 | 0.0131 | 0.0038 | 0.0147 | 0.0032 | 0.0135 | 0.0048 | 0.0165 | 0.0057 |
| Tasa secundaria absorción | 0.0031 | 0.0018 | 0.0031 | 0.0019 | 0.0023 | 0.0016 | 0.0025 | 0.0013 | 0.0043 | 0.0019 | 0.0039 | 0.0021 |



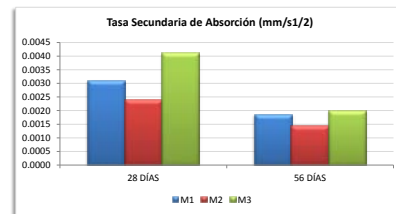
| | M1 | | M2 | | M3 | |
|---------------------------|---------|---------|---------|---------|---------|---------|
| | 28 días | 56 días | 28 días | 56 días | 28 días | 56 días |
| Índice Inicial absorción | 0.0136 | 0.0043 | 0.0139 | 0.0035 | 0.0150 | 0.0052 |
| Tasa secundaria absorción | 0.0031 | 0.0019 | 0.0024 | 0.0015 | 0.0041 | 0.0020 |



| Índice Inicial de Absorción | M1 | M2 | M3 |
|-----------------------------|--------|--------|--------|
| EDAD | | | |
| 28 DÍAS | 0.0136 | 0.0139 | 0.0150 |
| 56 DÍAS | 0.0043 | 0.0035 | 0.0052 |



| Tasa secundaria de Absorción | M1 | M2 | M3 |
|------------------------------|--------|--------|--------|
| EDAD | | | |
| 28 DÍAS | 0.0031 | 0.0024 | 0.0041 |
| 56 DÍAS | 0.0019 | 0.0015 | 0.0020 |



DATOS OBTENIDOS EN LABORATORIO E.C.I. SORTIVIDAD - EDAD DE CURADO 28 DÍAS

| Muestra | | Diámetro 1 (mm) | Diámetro 2 (mm) | Diámetro 3 (mm) | Diámetro 4 (mm) | Promedio Diámetro (mm) | Masa Inicial (g) |
|---------|------|-----------------|-----------------|-----------------|-----------------|------------------------|------------------|
| 28 DÍAS | M1-1 | 101.43 | 100.11 | 100.99 | 101.22 | 100.94 | 879.1 |
| | M1-2 | 100.48 | 100.77 | 101.11 | 101.19 | 100.89 | 873.6 |
| | M2-1 | 99.6 | 99.31 | 98.54 | 99.78 | 99.31 | 832.2 |
| | M2-2 | 99.03 | 99.51 | 100.01 | 99.26 | 99.45 | 823.5 |
| | M3-1 | 99.83 | 98.98 | 98.94 | 98.62 | 99.09 | 825 |
| | M3-2 | 98.26 | 99.92 | 100.04 | 98.68 | 99.23 | 815.6 |

| | | | | | | | |
|--|--|--|--|--|--|--|-------|
| | | | | | | | 879.1 |
| | | | | | | | 873.6 |
| | | | | | | | 832.2 |
| | | | | | | | 823.5 |
| | | | | | | | 825 |
| | | | | | | | 815.6 |

| Minutos | Horas | M1-1 | M1-2 | M2-1 | M2-2 | M3-1 | M3-2 |
|---------|-------|-------|-------|-------|-------|-------|-------|
| 0 | | 879.1 | 873.6 | 832.2 | 823.5 | 825 | 815.6 |
| 5 | | 882.5 | 877.2 | 835.9 | 827.5 | 829.2 | 820.7 |
| 10 | | 883.5 | 878.1 | 837.4 | 828.4 | 830.7 | 821.9 |
| 15 | | 884.5 | 879.1 | 838 | 829.3 | 831.5 | 822.6 |
| 30 | | 886.7 | 881.2 | 839.8 | 831.5 | 832 | 824.9 |
| | 1 | 889.4 | 883.9 | 842.4 | 834.4 | 834.9 | 828 |
| | 2 | 891.7 | 886.2 | 845.1 | 837 | 837.9 | 831.5 |
| | 3 | 893.4 | 887.8 | 846.6 | 838.7 | 839.7 | 833.7 |
| | 4 | 894.6 | 889.1 | 847.7 | 840.1 | 841 | 835.1 |
| | 6 | 896.3 | 890.8 | 848.5 | 841.8 | 842.1 | 836.1 |
| | 24 | 903.5 | 897.6 | 855 | 848.4 | 851 | 845 |
| | 48 | 907.9 | 901.8 | 857.9 | 851.9 | 856.2 | 849.7 |
| | 72 | 910.4 | 904.2 | 859.9 | 853.9 | 859.6 | 852.8 |
| | 96 | 912.2 | 906 | 861.1 | 855.2 | 861.9 | 854.9 |
| | 120 | 913.4 | 907.3 | 862.1 | 856.2 | 863.9 | 856.6 |
| | 144 | 914.3 | 908.2 | 862.7 | 856.8 | 865.3 | 857.9 |
| | 168 | 915.1 | 909 | 863.4 | 857.4 | 866.6 | 858.9 |
| | 192 | 915.6 | 909.6 | 863.9 | 857.8 | 867.5 | 859.8 |
| | 216 | 916.3 | 910.3 | 864.4 | 858.4 | 868.4 | 860.5 |

| | | | | | | |
|-----|-------|-------|-------|-------|-------|-------|
| 240 | 916.7 | 910.7 | 864.9 | 858.8 | 869.1 | 861.1 |
| 264 | 916.9 | 911 | 865.2 | 859 | 869.5 | 861.6 |
| 288 | 917.2 | 911.4 | 865.5 | 859.3 | 869.9 | 861.8 |
| 312 | 917.4 | 911.6 | 865.8 | 859.7 | 870.4 | 862.3 |
| 336 | 917.2 | 911.4 | 866.1 | 859.6 | 870.6 | 862.6 |
| 360 | 917.1 | 911.4 | 865.7 | 859.6 | 870.6 | 860.7 |
| 384 | 917.4 | 911.6 | 865.9 | 859.7 | 870.7 | 860.8 |

| Masa Inicial con guante (g) | 5 minutos | 10 minutos | 15 minutos | 30 minutos | 1 H. | 2 H. |
|-----------------------------|-----------|------------|------------|------------|-------|-------|
| 886.2 | 889.6 | 890.6 | 891.6 | 893.8 | 896.5 | 898.8 |
| 880.7 | 884.3 | 885.2 | 886.2 | 888.3 | 891 | 893.3 |
| 839.6 | 843.3 | 844.8 | 845.4 | 847.2 | 849.8 | 852.5 |
| 830.4 | 834.4 | 835.3 | 836.2 | 838.4 | 841.3 | 843.9 |
| 832.4 | 836.6 | 838.1 | 838.9 | 839.4 | 842.3 | 845.3 |
| 823 | 828.1 | 829.3 | 830 | 832.3 | 835.4 | 838.9 |

peso guante (g)

| | | | | | | |
|-----|-------|-------|-------|-------|-------|-------|
| 7.1 | 882.5 | 883.5 | 884.5 | 886.7 | 889.4 | 891.7 |
| 7.1 | 877.2 | 878.1 | 879.1 | 881.2 | 883.9 | 886.2 |
| 7.4 | 835.9 | 837.4 | 838 | 839.8 | 842.4 | 845.1 |
| 6.9 | 827.5 | 828.4 | 829.3 | 831.5 | 834.4 | 837 |
| 7.4 | 829.2 | 830.7 | 831.5 | 832 | 834.9 | 837.9 |
| 7.4 | 820.7 | 821.9 | 822.6 | 824.9 | 828 | 831.5 |

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 882.5 | 883.5 | 884.5 | 886.7 | 889.4 | 891.7 |
| 877.2 | 878.1 | 879.1 | 881.2 | 883.9 | 886.2 |
| 835.9 | 837.4 | 838 | 839.8 | 842.4 | 845.1 |
| 827.5 | 828.4 | 829.3 | 831.5 | 834.4 | 837 |
| 829.2 | 830.7 | 831.5 | 832 | 834.9 | 837.9 |
| 820.7 | 821.9 | 822.6 | 824.9 | 828 | 831.5 |

1 2 3 4
 24 48 72 96

| 3 H. | 4 H. | 6 H. | 24 H. | 48 H. | 72 H. | 96 H. |
|-------|-------|-------|-------|-------|-------|-------|
| 900.5 | 901.7 | 903.4 | 910.6 | 915 | 917.5 | 919.3 |
| 894.9 | 896.2 | 897.9 | 904.7 | 908.9 | 911.3 | 913.1 |
| 854 | 855.1 | 855.9 | 862.4 | 865.3 | 867.3 | 868.5 |
| 845.6 | 847 | 848.7 | 855.3 | 858.8 | 860.8 | 862.1 |
| 847.1 | 848.4 | 849.5 | 858.4 | 863.6 | 867 | 869.3 |
| 841.1 | 842.5 | 843.5 | 852.4 | 857.1 | 860.2 | 862.3 |

| | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|
| 893.4 | 894.6 | 896.3 | 903.5 | 907.9 | 910.4 | 912.2 |
| 887.8 | 889.1 | 890.8 | 897.6 | 901.8 | 904.2 | 906 |
| 846.6 | 847.7 | 848.5 | 855 | 857.9 | 859.9 | 861.1 |
| 838.7 | 840.1 | 841.8 | 848.4 | 851.9 | 853.9 | 855.2 |
| 839.7 | 841 | 842.1 | 851 | 856.2 | 859.6 | 861.9 |
| 833.7 | 835.1 | 836.1 | 845 | 849.7 | 852.8 | 854.9 |

893.4 894.6 896.3 903.5 907.9 910.4 912.2
 887.8 889.1 890.8 897.6 901.8 904.2 906
 846.6 847.7 848.5 855 857.9 859.9 861.1
 838.7 840.1 841.8 848.4 851.9 853.9 855.2
 839.7 841 842.1 851 856.2 859.6 861.9
 833.7 835.1 836.1 845 849.7 852.8 854.9

5 6 7 8 9 10 11
 120 144 168 192 216 240 264

| 120 H. | 144 H. | 168 H. | 192 H. | 216 H. | 240 H. | 264 H. |
|--------|--------|--------|--------|--------|--------|--------|
| 920.5 | 921.4 | 922.2 | 922.7 | 923.4 | 923.8 | 924 |
| 914.4 | 915.3 | 916.1 | 916.7 | 917.4 | 917.8 | 918.1 |
| 869.5 | 870.1 | 870.8 | 871.3 | 871.8 | 872.3 | 872.6 |
| 863.1 | 863.7 | 864.3 | 864.7 | 865.3 | 865.7 | 865.9 |
| 871.3 | 872.7 | 874 | 874.9 | 875.8 | 876.5 | 876.9 |
| 864 | 865.3 | 866.3 | 867.2 | 867.9 | 868.5 | 869 |

| | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|
| 913.4 | 914.3 | 915.1 | 915.6 | 916.3 | 916.7 | 916.9 |
| 907.3 | 908.2 | 909 | 909.6 | 910.3 | 910.7 | 911 |
| 862.1 | 862.7 | 863.4 | 863.9 | 864.4 | 864.9 | 865.2 |
| 856.2 | 856.8 | 857.4 | 857.8 | 858.4 | 858.8 | 859 |
| 863.9 | 865.3 | 866.6 | 867.5 | 868.4 | 869.1 | 869.5 |
| 856.6 | 857.9 | 858.9 | 859.8 | 860.5 | 861.1 | 861.6 |

913.4 914.3 915.1 915.6 916.3 916.7 916.9
 907.3 908.2 909 909.6 910.3 910.7 911
 862.1 862.7 863.4 863.9 864.4 864.9 865.2
 856.2 856.8 857.4 857.8 858.4 858.8 859
 863.9 865.3 866.6 867.5 868.4 869.1 869.5
 856.6 857.9 858.9 859.8 860.5 861.1 861.6

| | | | | |
|-----|-----|-----|-----|-----|
| 12 | 13 | 14 | 15 | 16 |
| 288 | 312 | 336 | 360 | 384 |

| 288 H. | 312 H. | 336 H. | 360 H. | 384 H. |
|--------|--------|--------|--------|--------|
| 924.3 | 924.5 | 924.3 | 924.2 | 924.5 |
| 918.5 | 918.7 | 918.5 | 918.5 | 918.7 |
| 872.9 | 873.2 | 873.5 | 873.1 | 873.3 |
| 866.2 | 866.6 | 866.5 | 866.5 | 866.6 |
| 877.3 | 877.8 | 878 | 878 | 878.1 |
| 869.2 | 869.7 | 870 | 868.1 | 868.2 |

| | | | | |
|-------|-------|-------|-------|-------|
| 917.2 | 917.4 | 917.2 | 917.1 | 917.4 |
| 911.4 | 911.6 | 911.4 | 911.4 | 911.6 |
| 865.5 | 865.8 | 866.1 | 865.7 | 865.9 |
| 859.3 | 859.7 | 859.6 | 859.6 | 859.7 |
| 869.9 | 870.4 | 870.6 | 870.6 | 870.7 |
| 861.8 | 862.3 | 862.6 | 860.7 | 860.8 |

| | | | | |
|-------|-------|-------|-------|-------|
| 917.2 | 917.4 | 917.2 | 917.1 | 917.4 |
| 911.4 | 911.6 | 911.4 | 911.4 | 911.6 |
| 865.5 | 865.8 | 866.1 | 865.7 | 865.9 |
| 859.3 | 859.7 | 859.6 | 859.6 | 859.7 |
| 869.9 | 870.4 | 870.6 | 870.6 | 870.7 |
| 861.8 | 862.3 | 862.6 | 860.7 | 860.8 |

DATOS OBTENIDOS EN LABORATORIO E.C.I. SOTVIVAC - EDAD DE CURADO 96 DIAS

| Muestra | Diámetro 1 (mm) | Diámetro 2 (mm) | Diámetro 3 (mm) | Diámetro 4 (mm) | Perímetro (Diámetro 1mm) | Masa Inicial (g) | Masa Inicial con puente (g) | 5 minutos | 10 minutos | 15 minutos | 30 minutos | 1 H. | 2 H. | 3 H. | 4 H. | 6 H. | 24 H. | 48 H. | 72 H. | 96 H. | 120 H. | 144 H. | 168 H. | 192 H. | 216 H. | 240 H. | 264 H. | 288 H. | 312 H. | 336 H. | 360 H. | 384 H. |
|---------|-----------------|-----------------|-----------------|-----------------|--------------------------|------------------|-----------------------------|-----------|------------|------------|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| MS-1 | 100.64 | 100.91 | 101.43 | 100.89 | 100.90 | 884.5 | 895.1 | 891.4 | 897.7 | 896.1 | 898.3 | 897.8 | 898.5 | 899 | 899.5 | 899.6 | 900.3 | 901.4 | 900.9 | 902.9 | 908.4 | 909.5 | 910 | 910.6 | 911.1 | 911.6 | 912 | 912.2 | 912.8 | 913.1 | 913.8 | 914 |
| MS-2 | 102.44 | 102.41 | 102.46 | 102.61 | 102.40 | 889 | 893.9 | 898.8 | 898.7 | 895.5 | 892.7 | 895 | 891.6 | 902 | 907.4 | 904.9 | 903.9 | 901.9 | 911.7 | 914.9 | 912.4 | 914.2 | 914.7 | 915.3 | 915.8 | 916.2 | 916.5 | 917 | 917.2 | 917.1 | 917.9 | 917.9 |
| MS-3 | 98.93 | 99.49 | 98.75 | 98.61 | 98.90 | 877.2 | 887.7 | 887 | 892.2 | 892.4 | 891.9 | 893.1 | 893.8 | 895.2 | 895.5 | 891.1 | 895 | 896.2 | 897 | 897.9 | 898.4 | 898.5 | 898.5 | 898.5 | 898.5 | 898.5 | 898.5 | 898.5 | 898.5 | 898.5 | 898.5 | 898.5 |
| MS-2 | 101.7 | 101.47 | 101.93 | 100.99 | 101.92 | 896.7 | 894.1 | 894.3 | 894.2 | 894.2 | 894.1 | 894.6 | 895 | 895 | 895 | 895 | 895 | 895 | 895 | 895 | 895 | 895 | 895 | 895 | 895 | 895 | 895 | 895 | 895 | 895 | 895 | 895 |
| MS-1 | 101.62 | 101.69 | 101.69 | 101.61 | 101.61 | 896.1 | 896.2 | 896.1 | 896.2 | 896.1 | 896.2 | 896 | 896 | 896 | 896 | 896 | 896 | 896 | 896 | 896 | 896 | 896 | 896 | 896 | 896 | 896 | 896 | 896 | 896 | 896 | 896 | 896 |
| MS-2 | 99.45 | 98.45 | 98.99 | 99.41 | 99.39 | 895.2 | 893.8 | 893.2 | 893.2 | 893.2 | 893.2 | 893.2 | 893.2 | 893.2 | 893.2 | 893.2 | 893.2 | 893.2 | 893.2 | 893.2 | 893.2 | 893.2 | 893.2 | 893.2 | 893.2 | 893.2 | 893.2 | 893.2 | 893.2 | 893.2 | 893.2 | 893.2 |

| Peso puente (g) | 7.6 | 887.5 | 887.8 | 888.1 | 888.5 | 889.3 | 890.2 | 890.9 | 891.4 | 892 | 895.6 | 897.8 | 899.3 | 900.3 | 901.2 | 901.9 | 902.4 | 903 | 903.5 | 904 | 904.4 | 904.6 | 905.2 | 905.5 | 905.5 | 905.2 | 905.4 |
|-----------------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 7.6 | 887.5 | 887.8 | 888.1 | 888.5 | 889.3 | 890.2 | 890.9 | 891.4 | 892 | 895.6 | 897.8 | 899.3 | 900.3 | 901.2 | 901.9 | 902.4 | 903 | 903.5 | 904 | 904.4 | 904.6 | 905.2 | 905.5 | 905.5 | 905.2 | 905.4 | |
| 7.5 | 829.5 | 829.7 | 829.9 | 830.4 | 831 | 831.8 | 832.3 | 832.7 | 833 | 835.8 | 837.5 | 838.7 | 839.5 | 840.3 | 840.9 | 841.4 | 842 | 842.4 | 842.8 | 843.2 | 843.4 | 843.7 | 843.8 | 843.5 | 843.6 | 843.6 | |
| 7.4 | 858.7 | 858.9 | 859 | 859.5 | 860.1 | 860.7 | 861.2 | 861.6 | 861.9 | 864.7 | 866.2 | 867.2 | 867.9 | 868.5 | 869.1 | 869.6 | 870 | 870.3 | 870.7 | 871 | 871.3 | 871.5 | 871.5 | 871.1 | 871.2 | | |
| 5.8 | 858.4 | 858.7 | 858.9 | 859.7 | 860.6 | 861.5 | 862.2 | 862.7 | 863.1 | 866.8 | 868.9 | 870.4 | 871.5 | 872.4 | 873.2 | 873.8 | 874.5 | 875 | 875.5 | 875.8 | 876 | 876.4 | 876.5 | 876.1 | 876.2 | | |
| 5.6 | 809.2 | 809.6 | 809.9 | 810.7 | 811.6 | 812.44 | 813.6 | 814.2 | 814.7 | 818.9 | 821.2 | 822.9 | 824.1 | 825.1 | 825.8 | 826.6 | 827.8 | 827.9 | 828.4 | 828.8 | 829.1 | 829.6 | 829.9 | 829.8 | 829.9 | | |

| Horas | MS-1 | MS-2 | MS-1 | MS-2 | MS-1 | MS-2 |
|-------|-------|-------|-------|-------|-------|--------|
| 0 | 884.5 | 889.3 | 893.2 | 896.1 | 895.1 | 892.9 |
| 5 | 887.5 | 892.8 | 895.5 | 898.7 | 894.4 | 892.9 |
| 10 | 887.8 | 891.1 | 892.7 | 898.9 | 894.7 | 892.9 |
| 15 | 888.1 | 891.2 | 892.9 | 899 | 894.9 | 892.9 |
| 30 | 888.5 | 894 | 893.4 | 899.5 | 895.7 | 893.7 |
| 1 | 889.5 | 894.7 | 891 | 899.1 | 895.6 | 893.6 |
| 2 | 890.2 | 895.5 | 891.8 | 899.7 | 896.5 | 894.44 |
| 3 | 890.9 | 896 | 892.3 | 899.2 | 897.6 | 895.6 |
| 4 | 891.4 | 896.5 | 892.7 | 899.6 | 897.7 | 895.2 |
| 6 | 892 | 896.9 | 893 | 899.9 | 898.1 | 895.7 |
| 24 | 895.6 | 901.1 | 895.8 | 894.7 | 896.8 | 898.9 |
| 48 | 897.8 | 903.4 | 897.5 | 896.2 | 898.9 | 892.2 |
| 72 | 899.8 | 905.1 | 898.7 | 897.2 | 899.4 | 892.9 |
| 96 | 900.3 | 906.2 | 899.5 | 897.9 | 897.5 | 894.1 |
| 120 | 901.2 | 907.2 | 899.9 | 898.5 | 897.4 | 895.1 |
| 144 | 901.9 | 907.9 | 899.9 | 898.1 | 897.2 | 895.8 |
| 168 | 902.4 | 908.6 | 899.4 | 898.6 | 897.8 | 896.6 |
| 192 | 903 | 909.2 | 892 | 897 | 894.5 | 892.3 |
| 216 | 903.5 | 909.8 | 892.4 | 897.1 | 895 | 892.9 |
| 240 | 904 | 910.1 | 892.8 | 897.7 | 895.5 | 893.6 |
| 264 | 904.6 | 910.7 | 893.2 | 897.1 | 895.8 | 893.8 |
| 288 | 904.6 | 911 | 893.4 | 897.1 | 896 | 893.9 |
| 312 | 905.2 | 911.5 | 893.7 | 897.5 | 896.4 | 893.6 |
| 336 | 905.5 | 911.7 | 893.8 | 897.5 | 896.6 | 893.9 |
| 360 | 905.2 | 911.6 | 893.5 | 897.1 | 896.5 | 893.8 |
| 384 | 905.4 | 911.8 | 893.6 | 897.2 | 896.6 | 893.9 |