Результаты сравнения оборачиваемости в ходе дисперсионного анализа.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Источник изменчивости** | **Сумма квадратов SS** | **Степени свободы df** | **Средний квадрат MS** | **F-критерий** | **Оценка значимости** |
| *Главные эффекты* | | | | | |
| Аптека | 15806.07 | 14 | 1129.005 | 1129.005 | **<0,00001** |
| Месяц | 2908.93 | 5 | 581.787 | 24.13480 | **<0,00001** |
| *Двухфакторный взаимодействия* | | | | | |
| Аптека\*месяц | 1687.40 | 70 | 24.106 | - | - |

|  |  |
| --- | --- |
| ***Гистограмма распределения остатков***  ***(эффект аптеки)*** | ***Гистограмма распределения остатков***  ***(эффект месяцы)*** |
|  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Критерий Левена однородности дисперсий (Таблица77.sta) Эффект: "Chem shop" Степени свободы для всех F: 14, 75 | | | | |
|  | **MS** | **MS** | **F** | **p** |
| **Data** | 59.50123 | 13.68173 | 4.348956 | 0.000014 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Критерий Левена однородности дисперсий (Таблица77.sta) Эффект: "Month" Степени свободы для всех F: 5, 84 | | | | |
|  | **MS** | **MS** | **F** | **p** |
| **Data** | 172.7590 | 62.11055 | 2.781475 | 0.022509 |

Данные при использовании критерия Фишера (аптеки):

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| НЗР крит.; перем. Data (Таблица данных5) Вероятности для апостер. критериев Ошибка: Пользов. MS = 1129.0, сс = 14.000 | | | | | | | | | | | | | | | | |
|  | **Chem shop** | **{1}** | **{2}** | **{3}** | **{4}** | **{5}** | **{6}** | **{7}** | **{8}** | **{9}** | **{10}** | **{11}** | **{12}** | **{13}** | **{14}** | **{15}** |
| **1** | 1 |  | 0.492681 | 0.369198 | 0.892623 | 0.185702 | 0.833033 | 0.557190 | 0.323948 | 0.755268 | 0.926047 | 0.761657 | 0.258814 | 0.268916 | 0.800357 | 0.472201 |
| **2** | 2 | 0.492681 |  | 0.826470 | 0.413966 | 0.054707 | 0.373520 | 0.919349 | 0.755268 | 0.323948 | 0.551644 | 0.698650 | 0.643834 | 0.661888 | 0.352260 | 0.973071 |
| **3** | 3 | 0.369198 | 0.826470 |  | 0.304757 | 0.035982 | 0.272349 | 0.748897 | 0.926047 | 0.233303 | 0.418633 | 0.546128 | 0.806864 | 0.826470 | 0.255512 | 0.852798 |
| **4** | 4 | 0.892623 | 0.413966 | 0.304757 |  | 0.230258 | 0.939461 | 0.472201 | 0.265516 | 0.859410 | 0.819920 | 0.661888 | 0.209814 | 0.218391 | 0.905971 | 0.395645 |
| **5** | 5 | 0.185702 | 0.054707 | 0.035982 | 0.230258 |  | 0.258814 | 0.066103 | 0.030042 | 0.301021 | 0.159369 | 0.111021 | 0.022289 | 0.023431 | 0.275816 | 0.051331 |
| **6** | 6 | 0.833033 | 0.373520 | 0.272349 | 0.939461 | 0.258814 |  | 0.428068 | 0.236380 | 0.919349 | 0.761657 | 0.608426 | 0.185702 | 0.193474 | 0.966343 | 0.356442 |
| **7** | 7 | 0.557190 | 0.919349 | 0.748897 | 0.472201 | 0.066103 | 0.428068 |  | 0.680164 | 0.373520 | 0.620122 | 0.774490 | 0.574008 | 0.591089 | 0.404737 | 0.892623 |
| **8** | 8 | 0.323948 | 0.755268 | 0.926047 | 0.265516 | 0.030042 | 0.236380 | 0.680164 |  | 0.201510 | 0.369198 | 0.487512 | 0.879309 | 0.899293 | 0.221311 | 0.780932 |
| **9** | 9 | 0.755268 | 0.323948 | 0.233303 | 0.859410 | 0.301021 | 0.919349 | 0.373520 | 0.201510 |  | 0.686303 | 0.540643 | 0.157138 | 0.163910 | 0.952895 | 0.308527 |
| **10** | 10 | 0.926047 | 0.551644 | 0.418633 | 0.819920 | 0.159369 | 0.761657 | 0.620122 | 0.369198 | 0.686303 |  | 0.833033 | 0.297319 | 0.308527 | 0.729900 | 0.529764 |
| **11** | 11 | 0.761657 | 0.698650 | 0.546128 | 0.661888 | 0.111021 | 0.608426 | 0.774490 | 0.487512 | 0.540643 | 0.833033 |  | 0.400174 | 0.413966 | 0.579673 | 0.674048 |
| **12** | 12 | 0.258814 | 0.643834 | 0.806864 | 0.209814 | 0.022289 | 0.185702 | 0.574008 | 0.879309 | 0.157138 | 0.297319 | 0.400174 |  | 0.979801 | 0.173318 | 0.667956 |
| **13** | 13 | 0.268916 | 0.661888 | 0.826470 | 0.218391 | 0.023431 | 0.193474 | 0.591089 | 0.899293 | 0.163910 | 0.308527 | 0.413966 | 0.979801 |  | 0.180663 | 0.686303 |
| **14** | 14 | 0.800357 | 0.352260 | 0.255512 | 0.905971 | 0.275816 | 0.966343 | 0.404737 | 0.221311 | 0.952895 | 0.729900 | 0.579673 | 0.173318 | 0.180663 |  | 0.335875 |
| **15** | 15 | 0.472201 | 0.973071 | 0.852798 | 0.395645 | 0.051331 | 0.356442 | 0.892623 | 0.780932 | 0.308527 | 0.529764 | 0.674048 | 0.667956 | 0.686303 | 0.335875 |  |

Данные при использовании критерия Тьюки (аптеки):

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Крит. Тьюки ДЗР; перем. Data (Таблица данных5) Приближенные вероятности для апостер. критериев Ошибка: Пользов. MS = 1129.0, сс = 14.000 | | | | | | | | | | | | | | | | |
|  | **Chem shop** | **{1}** | **{2}** | **{3}** | **{4}** | **{5}** | **{6}** | **{7}** | **{8}** | **{9}** | **{10}** | **{11}** | **{12}** | **{13}** | **{14}** | **{15}** |
| **1** | 1 |  | 0.999971 | 0.999375 | 1.000000 | 0.974728 | 1.000000 | 0.999996 | 0.998321 | 1.000000 | 1.000000 | 1.000000 | 0.993684 | 0.994825 | 1.000000 | 0.999949 |
| **2** | 2 | 0.999971 |  | 1.000000 | 0.999779 | 0.720197 | 0.999433 | 1.000000 | 1.000000 | 0.998321 | 0.999995 | 1.000000 | 1.000000 | 1.000000 | 0.999090 | 1.000000 |
| **3** | 3 | 0.999375 | 1.000000 |  | 0.997492 | 0.593897 | 0.995165 | 1.000000 | 1.000000 | 0.989654 | 0.999803 | 0.999994 | 1.000000 | 1.000000 | 0.993263 | 1.000000 |
| **4** | 4 | 1.000000 | 0.999779 | 0.997492 |  | 0.989029 | 1.000000 | 0.999949 | 0.994462 | 1.000000 | 1.000000 | 1.000000 | 0.983860 | 0.986263 | 1.000000 | 0.999659 |
| **5** | 5 | 0.974728 | 0.720197 | 0.593897 | 0.989029 |  | 0.993684 | 0.774945 | 0.539977 | 0.997292 | 0.959069 | 0.901635 | 0.455346 | 0.469049 | 0.995491 | 0.701236 |
| **6** | 6 | 1.000000 | 0.999433 | 0.995165 | 1.000000 | 0.993684 |  | 0.999844 | 0.990249 | 1.000000 | 1.000000 | 0.999999 | 0.974728 | 0.978112 | 1.000000 | 0.999170 |
| **7** | 7 | 0.999996 | 1.000000 | 1.000000 | 0.999949 | 0.774945 | 0.999844 |  | 1.000000 | 0.999433 | 0.999999 | 1.000000 | 0.999997 | 0.999999 | 0.999725 | 1.000000 |
| **8** | 8 | 0.998321 | 1.000000 | 1.000000 | 0.994462 | 0.539977 | 0.990249 | 1.000000 |  | 0.981154 | 0.999375 | 0.999967 | 1.000000 | 1.000000 | 0.986999 | 1.000000 |
| **9** | 9 | 1.000000 | 0.998321 | 0.989654 | 1.000000 | 0.997292 | 1.000000 | 0.999433 | 0.981154 |  | 1.000000 | 0.999993 | 0.957374 | 0.962319 | 1.000000 | 0.997679 |
| **10** | 10 | 1.000000 | 0.999995 | 0.999803 | 1.000000 | 0.959069 | 1.000000 | 0.999999 | 0.999375 | 1.000000 |  | 1.000000 | 0.997079 | 0.997679 | 1.000000 | 0.999990 |
| **11** | 11 | 1.000000 | 1.000000 | 0.999994 | 1.000000 | 0.901635 | 0.999999 | 1.000000 | 0.999967 | 0.999993 | 1.000000 |  | 0.999694 | 0.999779 | 0.999998 | 1.000000 |
| **12** | 12 | 0.993684 | 1.000000 | 1.000000 | 0.983860 | 0.455346 | 0.974728 | 0.999997 | 1.000000 | 0.957374 | 0.997079 | 0.999694 |  | 1.000000 | 0.968272 | 1.000000 |
| **13** | 13 | 0.994825 | 1.000000 | 1.000000 | 0.986263 | 0.469049 | 0.978112 | 0.999999 | 1.000000 | 0.962319 | 0.997679 | 0.999779 | 1.000000 |  | 0.972272 | 1.000000 |
| **14** | 14 | 1.000000 | 0.999090 | 0.993263 | 1.000000 | 0.995491 | 1.000000 | 0.999725 | 0.986999 | 1.000000 | 1.000000 | 0.999998 | 0.968272 | 0.972272 |  | 0.998697 |
| **15** | 15 | 0.999949 | 1.000000 | 1.000000 | 0.999659 | 0.701236 | 0.999170 | 1.000000 | 1.000000 | 0.997679 | 0.999990 | 1.000000 | 1.000000 | 1.000000 | 0.998697 |  |

Данные при использовании критерия Фишера (месяцы):

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| НЗР крит.; перем. Data (Таблица данных5) Вероятности для апостер. критериев Ошибка: Пользов. MS = 581.79, сс = 5.0000 | | | | | | | |
|  | **Month** | **{1}** | **{2}** | **{3}** | **{4}** | **{5}** | **{6}** |
| **1** | 5 |  | 0.846121 | 0.851732 | 0.829354 | 0.156743 | 0.237984 |
| **2** | 6 | 0.846121 |  | 0.994253 | 0.982762 | 0.203885 | 0.307685 |
| **3** | 7 | 0.851732 | 0.994253 |  | 0.977017 | 0.201916 | 0.304809 |
| **4** | 8 | 0.829354 | 0.982762 | 0.977017 |  | 0.209904 | 0.316455 |
| **5** | 9 | 0.156743 | 0.203885 | 0.201916 | 0.209904 |  | 0.757996 |
| **6** | 10 | 0.237984 | 0.307685 | 0.304809 | 0.316455 | 0.757996 |  |

Данные при использовании критерия Тьюки (месяцы):

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Крит. Тьюки ДЗР; перем. Data (Таблица данных5) Приближенные вероятности для апостер. критериев Ошибка: Пользов. MS = 581.79, сс = 5.0000 | | | | | | | |
|  | **Month** | **{1}** | **{2}** | **{3}** | **{4}** | **{5}** | **{6}** |
| **1** | 5 |  | 0.999914 | 0.999929 | 0.999856 | 0.599008 | 0.757968 |
| **2** | 6 | 0.999914 |  | 1.000000 | 1.000000 | 0.699248 | 0.849256 |
| **3** | 7 | 0.999929 | 1.000000 |  | 1.000000 | 0.695525 | 0.846147 |
| **4** | 8 | 0.999856 | 1.000000 | 1.000000 |  | 0.710384 | 0.858432 |
| **5** | 9 | 0.599008 | 0.699248 | 0.695525 | 0.710384 |  | 0.999179 |
| **6** | 10 | 0.757968 | 0.849256 | 0.846147 | 0.858432 | 0.999179 |  |