Table 1 Correlation of meteorological factors and malaria cases in Lagos state Nigeria

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Mean temperaturer1 | Mean humidityr2 | Mean rainfallr3 | Malaria casesr4 |
| Mean temperature | 1.00 |  |  |  |
| Mean humidity | 0.39 | 1.00 |  |  |
| Mean rainfall | 0.21 | 0.35 | 1.00 |  |
| Malaria cases | 0.65 | 0.50 | 0.43 | 1.00 |

**r=correlation coefficient, p<0.0**

Table 2 Correlation and regression analysis of the meteorological variables with malaria cases in Lagos state Nigeria January 2015 to April 2018

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Meteorological Variables |  |  |  |  | 95% CI of β |
| R | R2 | β | Constant | Lower | Upper |
| (Non-adjusted Model) |
| Mean temperature | 0.65 | 0.42 | 104.91\* | -1361.41 | 64.69 | 145.14 |
| Mean humidity | 0.50 | 0.25 | 7.87\* | 964.32 | 3.41 | 12.32 |
| Mean rainfall | 0.41 | 0.17 | 14.77\* | 1429.42 | 4.17 | 25.36 |
| (Adjusted Model) |
| Mean temperature |  |  | 83.22\* |  | 43.33 | 123.10 |
| Mean humidity |  |  | 3.52 |  | -.506.0 | 7.54 |
|  Mean rainfallConstant |  |  | 8.48-**1162.91** |  | -.087.0**-2223.87** | 17.05**-101.93** |

**\*Significant at 5%, R and R2 for the adjusted β is 0.74 and 0.55.**

Table 3 The Deseasonalization of the cases of malaria in Lagos state Nigeria January 2015 to April 2018

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Year | Quarter 1 | Quarter 2 | Quarter 3 | Quarter 4 |  |
| 2015 |  | 193.33 | - 176.67 | 102.67 |  |
| 2016 | 360 | -935.33 | 558 | 240.67 |  |
| 2017 | -287 | 623.67 | - 393.67 | - 372.67 |  |
| 2018 |  |  |  |  |  |
| Total | 73 | -118.33 | -12.33 | -29.33 |  |
| Mean | 24.33 | -39.44 | -4.11 | -9.78 | -7.25 |
|  | +7.25 | +7.25 | +7.25 | +7.25 |  |
| Quarter variation | 31.58 | -32.19 | 3.14 | -2.53 |  |