**Table 1. Optimization of pectinase production using synthetic sources**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Carbon source | Specific activity  (U/mg) | SD |  | Nitrogen source | Specific activity  (U/mg) | SD |
| Sucrose | 0.48 | 0.00 | Peptone | 0.39 | 0.00 |
| Maltose | 1.40 | 0.00 | Tryptone | 0.46 | 0.01 |
| Mannose | 1.23 | 0.00 | Yeast extract | 0.44 | 0.01 |
| Lactose | 2.68 | 0.01 | Sodium nitrite | 0.57 | 0.00 |
| Starch | 0.99 | 0.01 | Ammonium sulphate | 0.67 | 0.00 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Temp  (°C) | Specific activity  (U/mg) | SD |  | pH | Specific activity  (U/mg) | SD |
| 30 | 2.93 | 0.00 | 5 | 3.10 | 0.00 |
| 35 | 2.59 | 0.00 | 6 | 2.94 | 0.00 |
| 40 | 1.99 | 0.01 | 7 | 2.95 | 0.00 |
| 45 | 1.87 | 0.01 | 8 | 2.96 | 0.03 |
| 50 | 1.74 | 0.00 | 9 | 2.72 | 0.04 |

**Table 2. Optimization of growth conditions for pectinase production using agro-industrial wastes.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Agro industrial wastes | Specific activity  (U/mg) | SD |  | Substrate  Conc. (%) | Specific activity  (U/mg) | SD |
| Pomegranate peel | 2.22 | 0.01 | 0.5 | 1.23 | 0.02 |
| orange peel | 1.03 | 0.02 | 1 | 2.30 | 0.01 |
| chikku peel | 1.28 | 0.02 | 1.5 | 1.95 | 0.03 |
| lemon peel | 0.87 | 0.01 | 2 | 1.88 | 0.00 |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Temp  (°C) | Specific activity  (U/mg) | SD |  | pH | Specific activity  (U/mg) | SD |  | Incubation time | Specific activity  (U/mg) | SD |
| 30 | 1.02 | 0.01 | 5 | 1.57 | 0.00 | 24 | 2.82 | 0.03 |
| 35 | 2.19 | 0.01 | 6 | 2.85 | 0.00 | 48 | 2.81 | 0.02 |
| 40 | 2.80 | 0.01 | 7 | 2.72 | 0.01 | 72 | 3.27 | 0.02 |
| 45 | 2.40 | 0.01 | 8 | 2.60 | 0.01 | 96 | 3.47 | 0.02 |
| 50 | 1.83 | 0.00 | 9 | 2.28 | 0.04 | 120 | 3.16 | 0.00 |