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MICROBIAL ECOLOGY

PRATICAL REPORT

TITLE: ISOLATION OF SOIL MICRO-ORGANISMS

AIM: ISOLATION OF SOIL MICRO-ORGAMISMS AND MEASUREMENT OF PHYSICAL AND CHEMICAL PARAMETERS

MATERIALS: TEST TUBES, CONICAL FLASKS, MEASURING CYLINDER, BEAKER, PIPETTE, TEST TUBES RACKS, PETRI DISHES, SPIRIT LAMPS.

PROCEDURE:

* SOIL SAMPLES WERE COLLECTED FROM DIFFERENT DEPTHS (SOIL SURFACE, 15CM AND 30CM) FROM A BOTANICAL GARDEN AND KEPT IN BEAKER.
* 100ML OF DISTILLED WATER WAS MEASURED USING A MEASURING CYLINDER AND TURNED INTO A STERILE BEAKER.
* 1G OF THE SOIL SAMPLE WAS WEIGHED AND ADDED TO THE BEAKER CONTAINING THE DISTILLED WATER.
* STERILE TEST TUBES WERE LABELLED “10-1”,”10-2”,”10-3”,”10-4” AND “10-5”.
* 9ML OF DISTILLED WATER WAS ADDED TO EACH TEST TUBES USING PIPETTES.

OBSERVATION

|  |  |  |  |
| --- | --- | --- | --- |
| DILUTION | NUMBER OF COLONIES cfu/ml | | |
| SOIL SURFACE | 15CM | 30CM |
| 10”3 | 24 | 16 | 16 |
| 10”5 | 7 | 6 | 3 |

Incubated at 37.c for 24hours

|  |  |  |  |
| --- | --- | --- | --- |
| Physical and Chemical Parameters | Soil Surface | 15cm | 30cm |
| Color of Soil | Slightly dark | dark | Very dark |
| Nature of Soil particles | Sandy | Sandy | Aggregated |
| Temperature | 32`C | 24`C | 20`C |
| Ph | acidic | acidic | Acidic |

CONCLUSION: MICROORGANISMS INCREASES WITH INCREASING DEPTH