

The Experiments of Weather Instruments & Observations lab.

(Second Semester)

ASD / 1st Stage

2025 - 2026

**Lecturers: Assist.prof. Ruaa mazin , Assist.prof. Hassan mahmood,
L. Yasamin qusay**

Preparing by: Assist.prof. Ruaa M. Ibraheem, L. Nagham T. Ibraheem

Rain

The amount of rainfall is defined as: The depth of water measured in units of millimeters (mm) that covers a horizontal surface.

Rain gauges:

1. Rain Gauge device.
2. Inclined bucket device.
3. Rain recorder



Inclined bucket device



Rain recorder

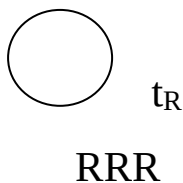
$6RRRt_R$



The sediment group is drawn on the station where (6) is the group guide

RRR the amount of sediment calculated from the table, t_R the period of sediment fall before the time of observation

Its location is as follows:



<i>Code number</i>	<i>RRR(mm)</i>
001	1
989	989
990	trace
991	0.1
999	0.9

<i>tR</i>	<i>Explanation</i>
1	<i>Total sedimentation amount during the observation period (6 hours) before</i>
2	<i>Total sedimentation amount during the observation period (12 hours) before</i>
3	<i>Total sedimentation amount during the observation period (18 hours) before</i>
4	<i>Total sedimentation amount during the observation period (24 hours) before</i>
5	<i>Total sedimentation amount during the observation period (1 hour) before</i>
6	<i>Total sedimentation amount during the observation period (2 hours) before</i>
7	<i>Total sedimentation amount during the observation period (3 hours) before</i>
8	<i>Total sedimentation amount during the observation period (9 hours) before</i>
9	<i>Total sedimentation amount during the observation period (15 hours) before</i>

7wwW₁W₂



The group of the present weather and the past weather, as (7) the group's guide

ww Elements of the present weather and an hour before the observation and take the numbers (00 - 99) as:

(00 – 49) means that there are no sediments in the station before the preparation of the stock, as this group relates to the lack of visibility or sediments prior to the preparation of the stock.

(50 – 99) Precipitation is present at the time of stock preparation.

W₁ and W₂ are elements of the past weather, and represent the last two essential phenomena

It appeared during the past 6 hours for monitoring at the following times (00, 06, 12, 18)



The following is a table of the meanings of the basic symbols of the elements of the present and past weather:

Sym.	meaning	Sym.	meaning
S	dust	*	snow
☯	eddy	↕	drift
≡	fog	~	freezing
•	rain	∇	showers
☂	drizzle	⚡	Thunder storms

$$8N_hC_LC_MC_H$$



Group types of clouds where (8) group index

N_h is the amount of low clouds, and if it is not available, it represents the amount of average clouds (C_M)

***note:**

This group is deleted if:

- a. There are **no clouds**, meaning that $N = 0$
- b. The sky is **obscured** by one of the weather phenomena, meaning that $N = 9$

The location of the clouds symbols around the station is as follows:

