



Do It Yourself to Investigate Water Seepage

Owners have the responsibility to properly manage and maintain their buildings. If water seepage occurs, owners should investigate the source of seepage by liaising with owners/occupiers of the flat concerned for carrying out repair works as early as possible.

**Co-operate with neighbours
to stop water seepage**

Water Seepage Investigation

DIY Guideline



1 Observe and record



1

seepage location
(ceiling, wall)



2

timing of occurrence
(continuous, intermittent
or after raining)



3

seriousness of dampness,
odour and colour



4

any defective drainage
pipe at external wall



2 Common sources and signs of seepage at ceiling

1 Defective drainage pipes embedded in floor slab of upper flat

- seepage area below kitchen, toilet or bathroom
- intermittent seepage with circular shape seepage area
- mouldy seepage area with stinky smell

2 Defective water - proofing of floor slab of upper flat

- ◆ seepage area below bathroom
- ◆ seepage area below surface channel or shower area
- ◆ relatively large seepage area with even dampness, or seepage area near walls

3 Leaking water supply pipe embedded in floor slab of upper flat

- ◆ water dripping at seepage area
- ◆ greyish crystalline deposit at seepage area, indicating presence of salt water



Simple Testing Methods

1 Drainage and water proofing of slab - colour water and ponding tests

- ◆ inexpensive and effective
- ◆ food dye to be used on health and safety considerations
- ◆ colour water may stain the ceiling/wall
- ◆ different colour dyes for identification of different testing locations



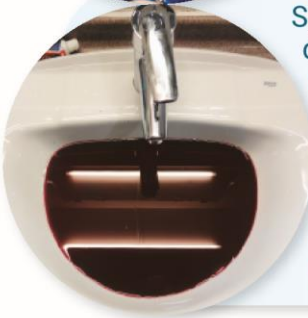
Dilute colour dye with about 10 liters of water

Fill basin and water storage tank of watercloset with colour water and then discharge the colour water



Wet the junction between floor drain and concrete slab with colour water and then pour colour water into the outlet

Splash all junctions of the walls of the shower area and curbs with colour water for a while and then discharge colour water into the outlet



Splash the wall sealant of the bathtub with colour water for a while and then discharge colour water into the outlet and overflow outlet (check connexion of overflow outlet)

Plug the floor drain and cover the floor with a shallow colour water pond[^] for 1 hour and then unplug the outlet

Plug the outlet of the shower area, splash junctions with walls and curbs, cover the shower area with a shallow colour water pond for 1 hour, and then unplug the outlet

Observe the seepage area to see any sign of colour water seepage as it may take 1 hour to 2 weeks for colour water to seep through and appear on the ceiling



[^] Install temporary precautionary measures such as water bags for surrounding furniture, electrical appliances, etc.

2 Embedded water supply pipes* - flow meter test



Turn off all water taps

Record the reading on the water meter and repeat again after 30 minutes

Check any change in the second reading to verify if there is leakage in the water supply pipes

3 Embedded water supply pipes* - reversible pressure test

Record the number of water dripping at prominent seepage spot on the ceiling for about 30 minutes

Turn off water supply mains

Turn on all taps to drain off water and release pressure within the water supply pipes

Record the number of water dripping at the selected spot again for 30 minutes

Observe if the dripping rate slows down to verify if there is leakage at the water supply pipes

Turn on the water supply mains and turn off all taps

Record the number of water dripping at the same selected spot again for 30 minutes to reconfirm if there is leakage at the water supply pipes

*It is advisable to engage a licensed plumber to conduct a comprehensive inspection of the water supply system, and to decide the appropriate investigation method such as use of pressurised equipment for testing.

Consider consulting a building professional for assistance if the source of seepage cannot be identified.

Joint Office of Buildings Department and Food and Environmental Hygiene Department

www.bd.gov.hk / www.fehd.gov.hk

For enquiries, please call **1823**