

TESTING PROCEDURE :
TESTING BY DTC – REAGENTS

perform the following table :

EVALUATION THE RESULT



FUNGICIDE
DITHIOCARBAMATE
TEST KIT

COLOR IN THE TUBE	RESULT
✦ Sample tube ≤ Blank tube	Not detected
✦ Sample tube > Blank tube	Detected, Safe
✦ An obviously violet color - grey appear in the sample tube	Detected, Unsafe

CAUTION

- Place testing kit out of children reach
- Should wear gloves during analysis
- When the chemical reagents contact your skin, wash out with the clean water .
- After using the DTC – Reagents, cap the bottles immediately

STORAGE OF DTC - REAGENTS

- ✦ Keep a set of DTC –Reagents at below 30°C, can be used with 6 months.

	BLANK TUBE	SAMPLE TUBE	
	DTC SOLUTION 250 microlitre	SAMPLE EXTRACT 250 microlitre	
DTC-1	250 microlitre	250 microlitre	shake
DTC-2	20 microlitre	20 microlitre	shake
DTC-3	250 microlitre	250 microlitre	shake
DTC-4	500 microlitre	500 microlitre	shake
DTC-5	200 microlitre	200 microlitre	shake *and observe the color

* If there are no color in every tubes , add 100 ul. of DTC- 5 in every tubes (shake and observe the color)

Evaluate the result : compare the color in the blank and sample tubes

FUNGICIDE : DITHIOCARBAMATE

Fungicide : Dithiocarbamates are another group of pesticides, widely used in the agricultural products especially in vegetables and fruits . Some chemicals in these group are less toxic , some are very toxic and there is a data of causing carcinogenic in the test animal. Nowadays, the trend of imported dithiocarbamates are going up, but there is no monitoring data of these residues in food. Therefore, the rapid test is now necessary in testing them for consumer protection.

: DTC TEST KIT

Detection Limit : Peppers, Chili 0.8 mg./kg.
(as mancozeb) Other vegetables & Fruits 0.4 mg./kg.

TARGET SAMPLE

Vegetables & Fruit

TARGET COMPOUNDS

ZINEB , MANEB ,MANCOZEB, METRIRAM,
MABAM, NABAM, PROPINEB, THIRAM, ZIRAM ,
FERBAM

EQUIPMENT, GLASSWARES & DTC KIT

● EQUIPMENT & GLASSWARE :

- Vortex Mixer, Test tube, Rack, Forceps,
Glass funnel, size 3.5 -4.5 cm., Autopipette size
100-1000 ul. and 10-100 ul.

● DTC REAGENTS :

DTC SOLUTION, DTC - 1, DTC - 2, DTC - 3,
DTC - 4, DTC -5, COTTON WOOL

TESTING PROCEDURE : EXTRACTION



✦ Sampling and weigh
20g. of sample except
10 g. for pepper, chili.

✦ Pipette 1 ml. of
DTC- solution in to a
test tube

✦ Roll a cotton wool
in cycle diameter
about 1 cm. and put in
a glass funnel, which
supported by 1 ml.
DTC solution test tube
, then pipette ~ 0.5 ml.



of DTC solution from
the tube in to the
cotton wool or only for
wetting.

✦ Catch the wet cotton
wool by a forceps and
swab on the outer part of
the sample until the
sample left

✦ Put the swab cotton
wool (already swab the
outer part of sample) in
to the original tube, then
shake with Vortex

✦ Catch the wool from
the tube and put on the
glass funnel.

✦ Squeeze the wool
until drying. Then leave
the wool and take the
glass funnel off.

✦ Shake the sample
extract homogeneously
and bring to test for
DTC –residues with
DTC –Reagent Kit.