Moss Inc. Enzyme Substrates

HO.

H₃C

O Na

CH,

→ KCO₃+ 2

Moss Inc. Enzyme Substrates

- Liquid mixtures of chemicals
- Used for medical testing
- Designed for specific enzymes
- Substrates undergo a change when used with enzyme conjugates to test a patient sample

Rh Pd

Os)

r

PU

 $=H^{3}O$

OH²₌

19

Moss Inc. Enzyme Substrates

- How are Moss substrates categorized?
 - Two major enzyme categories
 - Horseradish Peroxidase
 - Alkaline Phosphatase
 - Two major application categories
 - Soluble
 - Insoluble
 - Two types of signal categories
 - Chromogenic
 - Luminogenic







Best Practices With Enzyme Substrates

- Pour out the volume needed
- Never introduce a pipet or any other device into the bottle
- Do not to return any liquid back into the bottle
- □ Minimize room light exposure
- Avoid any exposure to sunlight
- Use only recommended diluents and stop
- □ Keep bottles refrigerated

Moss Inc. Soluble Substrates Limit of Detection in a Homogeneous Assay

Enzvme	Product	Detection	Detection Limit
HRP	ABTS	415 nm Green	9 pg/well
ЦОО		650 pm Blue, 450 pm Gold	
	NDDD		
AP	NPPD	405 nm Yellow	2 pg/well
HRP	TMBE	650 nm Blue, 450 nm Gold	1 pg/well
HRP	TMBUS	650 nm Blue, 450 nm Gold	0.8 pg/well
HRP	ТМВНК	650 nm Blue, 450 nm Gold	0.3 pg/well
HRP	ChemiHRP	Light Emission	0.18 pg/well
AP	ChemiAP	Light Emission	0.04 pg/well

Substrate Expiration Dating

Substrate	Current	Proposed	Max
ТМВНК	30	30	30
TMBES	24	24	24
NPPD	24	24	24
TMBUS	30	48	60
NBTH	30	48	48
NBTH-HYB	30	48	48
ТМВМ	24	48	48
ТМВЕ	30	48	48
NBTM	36	48	90
ABTS	24	36	36
ТМВН	30	36	40

TMB Blue and Gold



statistics, cam + 1575278800

TMB Blue



ABTS Green





Stop Reagents for ELISA Substrates

- Stop reagents are acids, bases, detergents, or ions
- They stop color development so that an analyte can be accurately measured
- The stop reagent freezes or destroys the enzyme

Stop Reagent	Substrate	Active Agent	Stopped Color
Stop 650	TMB	Sodium Fluoride	Blue
Detergent	TMB	SDS	Blue
Universal Stop	TMB	Maleic Acid	Gold
Acid	TMB	Sulfuric Acid	Gold
Acid	TMB	Hydrochloric Acid	Gold
Acid	ABTS	Oxalic	Green
Base	NPPD, PNPP	Sodium Hydroxide	Yellow



Membrane Substrates

