



### Malachite Green Phosphate Assay Kits

The Malachite Green Phosphate Assay Kit is based on quantification of the green complex formed between Malachite Green, molybdate and free orthophosphate. The rapid color formation from the reaction can be conveniently measured on a spectrophotometer (600 - 660 nm) or on a plate reader. The non-radioactive colorimetric assay kits have been optimized to offer superior sensitivity and prolonged shelf life. The assay is simple and fast, involving a single addition step for phosphate determination. Assays can be executed in tubes, cuvettes or multi-well plates. The assays can be conveniently performed in 96- and 384-well plates for high-throughput screening of enzyme inhibitors.

#### APPLICATIONS:

**Phosphatase assay** for released phosphate from phosphopeptide, protein or small molecule substrate [1].

**Phospholipase or lipase assay** for released phosphate from phospholipids [2].

**Nucleoside triphosphatase (ATPase, GTPase etc) assay** for released phosphate from nucleoside triphosphates (ATP, GTP, TTP, CTP etc).

**Phytase assay** for released phosphate from phytic acid.

**Quantitation of phosphate** in phospholipids [2], proteins and DNAs.

**High-throughput drug discovery** [1].

#### KEY FEATURES:

**Reagent very stable.** Due to our innovative formulation, no precipitation of reagent occurs. Therefore no filtration of reagent is needed prior to assays.

**High sensitivity and wide detection range:** detection of as little of 1.6 pmoles of phosphate and useful range between 0.02  $\mu\text{M}$  and 20  $\mu\text{M}$  phosphate.

**Fast and convenient:** single reagent "mix-and-measure" assay allows quantitation of free phosphate within 30 minutes.

**Compatible with routine laboratory and HTS formats:** assays can be performed in tubes, cuvettes or microplates, on spectrophotometers and plate readers.

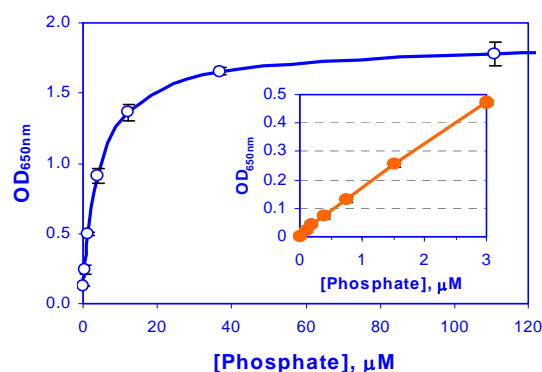
**Robust and amenable to HTS:** Z' factors of 0.7 to 0.9 are observed in 96-well plates. Can be readily automated on HTS liquid handling systems.

Malachite Green  
Phosphate Assay Kit

POMG-25H

Each kit is sufficient for 2,500 assays in 96-well plate. Kit includes:

- 1 x 50mL Reagent
- 1 vial 1mL 1mM Phosphate standard



Standard Curve in 96-well plate in assay

#### REFERENCES:

[1]. Fisher DK and Higgins TJ (1994) A sensitive, high-volume, colorimetric assay for protein phosphatases. Pharm Res. 11:759-763.

[2]. Petitou M et al (1978) A simplified procedure for organic phosphorus determination from phospholipids. Anal Biochem. 91:350-353.