Troubleshooting Guide

	Potential Cause	Corrective Action(s)
Poor Precision	Contamination	If a plate seal is used for the assay, check that the plate seal has not been contaminated with the reagent. When re-using the pipet tips for dispensing reagents, avoid touching the reagents on the plate and pipet carefully to prevent splashing of reagents from one well to the next.
	Inhomogeneous sample	Make sure to thoroughly mix the sample prior to pipetting.
	High level of particulate matter	During sample preparation, centrifuge or filter the sample extract before performing the assay.
	Inefficient washing	Use a wash bottle or plate washer for best results, instead of washing manually with a pipettor. Be sure to remove any bubbles prior to continuing to the next wash step.
	Insufficient aspiration	Tap plate dry on paper towels to remove residual liquid and check that wells appear dry.
	Presence of bubbles	Before reading the plate, use a needle or pipet tip to burst any bubbles present in the well.
	Pipetting error	Check that the pipet is calibrated properly and repeat the assay. Use a multi-channel pipet to minimize the time it takes for addition of reagents. Alternatively, run fewer samples to reduce the variability.
Poor Standard Curve	Deterioration of standards	Check that the standards have not exceeded the expiration date on the label. Check that the standards have been properly stored.
	Improper dilution	If the assay requires dilutions, make sure that the dilutions were performed accurately.
	Inefficient washing	Use a wash bottle or plate washer for best results, instead of washing manually with a pipettor.
	Insufficient aspiration	Tap plate dry on paper towels to remove residual liquid and check that wells appear dry
No Signal/Low Signal	Performance error	Check that the correct assay is being performed and proper components are being used.
	Deterioration of reagents	Check that the reagents have not exceeded the expiration date on the label. Check that the components have been properly stored.
	Contamination	The substrate may have been contaminated with stop solution. Aliquot only the necessary volume of reagents and do NOT return unused reagents back to the original bottle.
	Temperature	Cooler ambient temperatures will slow the enzyme reaction. Make sure the assay is performed within the appropriate temperature range listed in the package insert. Additionally, make sure reagents have reached room temperature prior to starting the assay.
	Conjugate not added or was prepared inco	Add the conjugate according to the assay procedures listed in the product insert. If any dilution is required, check
	Presence of sodium azide	Do NOT add sodium azide in the wash buffer or other reagents. Sodium azide is known to inhibit the HRP reaction.
	Incubation time	Do NOT reduce the incubation time. Adhere to all incubation times listed in the package insert for optimal results.
	Plate Reader	Check that plate reader is on the proper setting with the correct filters.
High Background/High Signal	Inefficient washing	Use a wash bottle or plate washer for best results, instead of washing manually with a pipettor.
	Temperature	Warmer ambient temperatures will speed the enzyme reaction. Make sure the assay is performed within the appropriate temperature range listed in the package insert.
	Incubation time	Do NOT extend the incubation time. Adhere to all incubation times listed in the package insert.
	Conjugate not added or was prepared inco	Add the conjugate according to the assay procedures listed in the product insert. If any dilution is required, check that the conjugate was prepared at the correct dilution. Be sure to cover/seal the plate during incubation steps, as the conjugate is light sensitive.
	Contamination	The substrate may have been contaminated. The solution should be clear/faint yellow. If it has a bluish tint, then it may have been contaminated with the enzyme conjugate. Discard and obtain a new substrate bottle to re-run the assay.
	Plate Reader	Check that plate reader is on the proper setting with the correct filters.
Unforeseen result	Incorrect calculation	Check to make sure all dilutions are accounted for in the final calculation.
	Improper sampling	Make sure the sample is uniform and that the proper sample size was used. The extraction procedure lists the minimum sample to test.
	Insufficient extraction	Adhere to the extraction buffer type, volume, and time.
	Sample is out of range of the standard curv	If the OD value of the sample is not within the OD values of the standard curve, then the analyte in the sample may be too dilute or too concentrated for the assay. If the sample is too concentrated, dilute the sample and re-assay.
	Commodity not validated	Check that the kit has been validated for the commodity of interest. Check that the correct extraction procedures are being applied to the particular food commodity. Consider using the low matrix kits, which are designed to be minimally affected by the commodity.

	故障排除指南Troubleshooting Guide	
	可能的原因Potential Cause	纠正措施Corrective Action(s)
精度差 Poor Precision	污染	如果密封板用于测定中，检查密封板有没有被试剂污染。当使用同一枪头分配某一试剂时，避免枪头接触微孔板，并谨慎吸取试剂以防止试剂从一微孔溅入另一微孔。
	采样不均匀	取样之前确保样品得到充分混合。
	高水平的颗粒物质	制备样品时，离心或过滤样品萃取液后再进行测定。
	洗涤效率低下	用清洗瓶或洗板机代替手动移液器来清洗以获得最佳效果。进行到下一个清洗步骤之前一定要除去所有气泡。
	拍干不足	拍打微孔板于纸巾上除去残留的液体，确保微孔板干燥。
	泡沫的存在	在读取微孔板吸光度之前，用针或枪头破除微孔板中所有气泡。
	移液错误	确保吸管正确校准过，并重复检测。使用多通道移液管，以尽量缩短添加试剂所使用的时间。或者，微孔板上运行较少的样本，以减少变异性。
标准曲线不理想 Poor Standard Curve	标准品质变	检查标准品是否超出标签上的有效日期。检查标准品是否得到了妥善保存。
	稀释不当	如果实验需要稀释，请确保稀释准确。
	洗涤效率低下	用清洗瓶或洗板机代替手动移液器来洗板以获得最佳效果。
	拍干不足	拍打微孔板于纸巾上除去残留的液体，确保微孔板干燥。
没有信号/信号低 No Signal/Low Signal	操作错误	确保测定准确，使用了准确的相应试剂。
	试剂变坏	检查相应试剂是否超出标签上的有效日期。检查相应试剂是否得到了妥善保存。
	污染	移取所需量的试剂，未使用完的试剂不得返回原始瓶中。
	温度	环境温度低会减缓酶反应。确保所述测定在说明书中列出的相应温度范围内进行。此外，开始检测之前确保试剂已经达到室温。
	酶结合物没有添加或准备不正确	根据产品说明书要求添加酶联耦合物。如果酶结合物需要稀释，确保稀释准确。
	叠氮化钠存在下	不要在洗涤缓冲液或其他试剂中添加叠氮化钠。叠氮化钠是已知的可抑制HRP反应。
	培养时间	不得减少孵育时间。坚持执行说明书中列出的所有孵育时间以获得最佳实验效果。
	酶标仪	检查酶标仪设定准确，滤光片设定准确。
背景值高/显色过深 High Background/High Signal	洗涤效率低下	用清洗瓶或洗板机代替手动移液器来清洗以获得最佳效果。进行到下一个清洗步骤之前一定要除去所有气泡。
	温度	环境温度高会加速酶反应。确保所述测定在说明书中列出的相应温度范围内进行。
	孵育时间	不要延长孵育时间。坚持执行说明书中列出的所有孵育时间要求以获得最佳实验效果
	酶结合物添加过量或准备不正确	根据说明书要求添加酶结合物。如果需要稀释，确保稀释准确。在孵育过程中盖/密封微孔板，酶结合物对光敏感。
	污染	底物可能被污染。底物试剂应当是透明/淡黄色。如果它有蓝色迹象，那么它可能已被酶结合物污染。丢弃并取到新的底物瓶后重新运行检测。
	酶标仪	检查酶标仪设定准确，滤光片设定准确。
结果异常 Unforeseen result	计算不正确	检查并确保稀释倍数已计入最终结果计算中。
	采样不正确	确保样品的均一性，并且使用适当的样本量。在样品提取过程中列出了最低样品量 。
	提取不足	提取缓冲液类型，量和时间需符合要求。
	样品超出标准曲线的范围	如果样品的OD值不在标准曲线的OD值范围内，则样品中的分析物可能浓度太低或太高。如果样品是浓度太高，稀释样品后重新检测。
	没有经过验证的商品	检查试剂盒已经通过该商品验证。检查正确的提取步骤被应用到该食 用商品检测方法中。推荐使用低基质试剂盒，其被设计成最低限度地受不同商品影响。