



Management and Disposal of Qiagen Materials

Recently we have had a few incidences involving the use of bleach with a variety of chemical materials in Qiagen kits. Most of the chemicals in these kits are not compatible with bleach and should be treated as chemical waste. When working with chemicals, always wear a suitable lab coat, disposable gloves, and protective goggles. For more information, please consult the appropriate safety data sheet as well as the Qiagen kit handbook (<https://www.qiagen.com/resources/download.aspx?id=22df6325-9579-4aa0-819c-788f73d81a09&lang=en>).

DO NOT add bleach or acidic solution directly to the sample-preparation waste. Some of the kits contain guanidine hydrochloride, which can form highly reactive compounds when combined with bleach. Please refer to Table 1 as guide on how to management and dispose of Qiagen materials.

Table 1: Guide on proper disposal of Qiagen Materials

Reagent Name	Chemical Components	Management/Disposal Requirements
Buffer AE		**See note
Buffer AL	Guanidinium Chloride @ 25-50% Non-Hazardous Proprietary Ingredients @ Balance	Chemical Hazardous Waste
Buffer ALO	Sodium Dodecyl Sulphate @ 0.1-1.0% Non-Hazardous Proprietary Ingredients @ Balance	Chemical Hazardous Waste
Buffer AP1	Sodium Dodecyl Sulphate @ 1.0-2.5% Non-Hazardous Proprietary Ingredients @	Chemical Hazardous Waste

Reagent Name	Chemical Components	Management/Disposal Requirements
	Balance	
Buffer AP2	Acetic Acid @10-25% Non-Hazardous Proprietary Ingredients @ Balance	Chemical Hazardous Waste
Buffer AP3/E	Guanidinium Chloride @ 50-100% Non-Hazardous Proprietary Ingredients @ Balance	Chemical Hazardous Waste
Buffer APP	Zinc Chloride @ 1.0-2.5% Non-Hazardous Proprietary Ingredients @ Balance	Chemical Hazardous Waste
Buffer ATL	Sodium Dodecyl Sulphate @ 2.5-10% Non-Hazardous Proprietary Ingredients @ Balance	Chemical Hazardous Waste
Buffer AW		**See note
Buffer AW1	Guanidinium Chloride @ 50-100% Non-Hazardous Proprietary Ingredients @ Balance	Chemical Hazardous Waste
Buffer AW2	Sodium Azide @ 0.1% Non-Hazardous Salt Buffer @ 99.9%	Chemical Hazardous Waste
Buffer BB	Cetrimonium Bromide @ 0.1-1.0% Non-Hazardous Proprietary Ingredients @ Balance	Chemical Hazardous Waste

Reagent Name	Chemical Components	Management/Disposal Requirements
Buffer EB		**See note
Buffer EC		**See note
Buffer ETR		**See note
Buffer EX Reaction Buffer		**See note
Buffer N3	Guanidinium Chloride @ 25-50% Acetic Acid @ 10-25% Non-Hazardous Proprietary Ingredients @ Balance	Chemical Hazardous Waste
Buffer P1		**See note
Buffer P3	Acetic Acid @ 10-25% Non-Hazardous Proprietary Ingredients @ Balance	Chemical Hazardous Waste
Buffer PE		**See note
Buffer PB	Guanidinium Chloride @ 25-50% Propan-2-ol @ 25-50% Non-Hazardous Proprietary Ingredients @ Balance	Chemical Hazardous Waste
Buffer PNI	Guanidinium Chloride @ 25-50% Propan-2-ol @ 25-50% Non-Hazardous Proprietary Ingredients @	Chemical Hazardous Waste

Reagent Name	Chemical Components	Management/Disposal Requirements
	Balance	
Buffer QBT	Propan-2-ol @ 10-25% Non-Hazardous Proprietary Ingredients @ Balance	Chemical Hazardous Waste
Buffer QC	Propan-2-ol @ 10-25% Non-Hazardous Proprietary Ingredients @ Balance	Chemical Hazardous Waste
Buffer QG	Guanidine Thiocyanate @ 50-100% Non-Hazardous Proprietary Ingredients @ Balance	Chemical Hazardous Waste
Buffer QLE		**See note
Buffer QLL	Dimethyl-N-Lauryl-N-(3-Sulfopropyl)- Ammonium- Betain @ 2.5-10% Guanidinium Chloride @ 1.0-2.5% Guanidine Thiocyanate @ 1.0-2.5% Non-Hazardous Proprietary Ingredients @ Balance	Chemical Hazardous Waste
Buffer QLW		**See note
Buffer QN	Propan-2-ol @ 10-25% Non-Hazardous Proprietary Ingredients @ Balance	Chemical Hazardous Waste

Reagent Name	Chemical Components	Management/Disposal Requirements
Buffer QS	Propan-2-ol @ 10-25% Non-Hazardous Proprietary Ingredients @ Balance	Chemical Hazardous Waste
Buffer QX1	Sodium Perchlorate @ 50-100% Non-Hazardous Proprietary Ingredients @ Balance	Chemical Hazardous Waste
Buffer RDD		**See note
Buffer RNAlater		**See note
Buffer RLC	Guanidinium Chloride @ 50-100% Non-Hazardous Proprietary Ingredients @ Balance	Chemical Hazardous Waste
Buffer RLT	Guanidine Thiocyanate @ 25-50% Non-Hazardous Proprietary Ingredients @ Balance	Chemical Hazardous Waste
Buffer RPE (concentrate)		**See note
Buffer RT	Trometamol @ 2.5-10% Hydrogen Chloride @ 2.5-10% Non-Hazardous Proprietary Ingredients @ Balance	Chemical Hazardous Waste
Buffer RW1	Guanidine Thiocyanate @ 2.5-10% Ethanol @ 2.5-10% Non-Hazardous Proprietary Ingredients @	Chemical Hazardous Waste

Reagent Name	Chemical Components	Management/Disposal Requirements
	Balance	
Buffer RWT	Guanidine Thiocyanate @ 25-50% Non-Hazardous Proprietary Ingredients @ Balance	Chemical Hazardous Waste
Buffer S3	Acetic Acid @ 2.5-10% Non-Hazardous Proprietary Ingredients @ Balance	Chemical Hazardous Waste
dNTP Mix	Non-Hazardous Proprietary Ingredients @ 100%	Chemical Hazardous Waste
Effectene Transfection Buffer	Non-Hazardous Proprietary Ingredients @ 100%	Chemical Hazardous Waste
Enhancer	Non-Hazardous Proprietary Ingredients @ 100%	Chemical Hazardous Waste
Exonuclease Solvent (Buffer)		**See note
gDNA Wipeout Buffer	Trometamol @ 2.5-10% Non-Hazardous Proprietary Ingredients @ Balance	Chemical Hazardous Waste
GelPilot Loading Dye	Trometamol @ 2.5-10% Non-Hazardous Proprietary Ingredients @ Balance	Chemical Hazardous Waste
LyseBlue	Non-Hazardous Proprietary Ingredients @	Chemical Hazardous Waste

Reagent Name	Chemical Components	Management/Disposal Requirements
	100%	
Lysozyme	Non-Hazardous Proprietary Ingredients @ 100%	Chemical Hazardous Waste
Multiplex PCR Master Mix 2x	Non-Hazardous Proprietary Ingredients @ 100%	Chemical Hazardous Waste
Omniscript Reverse Transcriptase		Chemical Hazardous Waste
OneStep Enzyme Mix		Chemical Hazardous Waste
OneStep RT-PCR Buffer	Trometamol @ 2.5-10% Non-Hazardous Proprietary Ingredients @ Balance	Chemical Hazardous Waste
pH Indicator I	Cresol Red @ <1% Non-Hazardous Proprietary Ingredients @ Balance	Chemical Hazardous Waste
Proteinase K	Proteinase @ <1% Non-Hazardous Proprietary Ingredients @ Balance	Chemical Hazardous Waste
Qiagen Resin		Chemical Hazardous Waste
QIAEX II Suspension	Sodium Perchlorate @ 50-100% Non-Hazardous Proprietary Ingredients @ Balance	Chemical Hazardous Waste

Reagent Name	Chemical Components	Management/Disposal Requirements
QIAzol Lysis Reagent	Phenol @ 25-50% Guanidine Thiocyanate @ 10-25% Non-Hazardous Proprietary Ingredients @ Balance	Chemical Hazardous Waste
Q-Solution 5x	Non-Hazardous Proprietary Ingredients @ Balance	Chemical Hazardous Waste
QuantiFast SYBR Green PCR Master Mix	1,2,4-Triazole @ 1.0-2.5% 2-amino-2-(hydroxymethyl)propane-1,3-diolhydrochloride @ 1.0-2.5% Non-Hazardous Proprietary Ingredients @ Balance	Chemical Hazardous Waste
QuantiScript Reverse Transcriptase		Chemical Hazardous Waste
QuantiScript RT Buffer 5x		Chemical Hazardous Waste
QuantiTect RT Mix		Chemical Hazardous Waste
RNase A Solution	Ribonuclease @ 2.5-10% Non-Hazardous Proprietary Ingredients @ Balance	Chemical Hazardous Waste
RT Primer Mix	Non-Hazardous Proprietary Ingredients @ 100%	Chemical Hazardous Waste
SuperFect Transfection Reagent	Non-Hazardous Proprietary Ingredients @ 100%	Chemical Hazardous Waste
SYBR Green RT-PCR Master Mix	Sodium Azide @ 0.27% Tris Buffer @	Chemical Hazardous Waste

Reagent Name	Chemical Components	Management/Disposal Requirements
	Balance	

**Can be drain disposed but the maximum combined total volume that can be discharged is 100 grams of solute per laboratory per day. After drain disposal, please flush with at least 10-20-fold excess of water to thoroughly rinse out the sink and sink trap, and to dilute the waste.

Note: The information in the table above only applies to the reagents when they are not mixed with any other chemicals. Please contact your EHS Safety Specialist for proper management/disposal of any Qiagen reagents not listed above.