

PureLink™ Quick Gel Extraction Kit

Comparison to Former Product



Green Benefits

- Less hazardous
- Less use of nonrenewable resources
- Less energy to produce
- Decreased fuel consumption and greenhouse gas emissions for transport
- Less waste disposal

Introduction

Life Technologies is committed to designing products with the environment in mind—it's one more step toward a smaller footprint. This fact sheet provides the rationale behind the environmental claim that this product is now less hazardous than its preceding product. The Gel Solubilization Buffer component in the PureLink™ Quick Gel Extraction Kit has been reformulated to be less hazardous. This change means it no longer needs to be shipped as dangerous goods per international transport classifications, and requires less packaging. Use of less packaging translates to utilizing fewer resources, generating less waste, and emitting fewer greenhouse gases during transit.

Product Description

The PureLink™ Quick Gel Extraction Kit is designed to purify DNA fragments directly from agarose gels, using a silica-based resin free of proteins, dye, and agarose.

Green Features

Less Hazardous

Applying the principles of green chemistry[1], the oxidative property of the Gel Solubilization Solution component of the PureLink™ Quick Gel Extraction Kit was eliminated. The current formulation is less hazardous, allowing the product to be shipped as nonhazardous for transport.

Please see the MSDS representing the new formulation at www.invitrogen.com/msds.

Sustainable Packaging

To meet regulatory obligations to ensure the safe delivery of products, the previous formulation of the PureLink™ Quick Gel Extraction Kit required the kit to be surrounded by absorbent packing material, within a rigid outer container (e.g., a metal can), and placed into a heavy-walled corrugate box.

By applying principles of green chemistry to devise a less hazardous formulation, the product is no longer regulated for transport and has allowed for reduction of the outer packaging by 78% (Table 1) [2].

Table 1. Reduction of Packaging Weight for the PureLink™ Quick Gel Extraction Kit..

Total packaging before reformulation (lb)	1.64
Total packaging today (lb)	0.36
Net reduction	78%

Elimination of the excess packaging improved the freight density of this product (Table 2), thereby reducing fuel consumption and greenhouse gas emissions associated with transport [2].

Table 2. Improvement in Freight Density with Elimination of Excess Packaging.

	K21002 (cu. in.)	K21002 (cu. in.)
DG Pkg	686	3844
Non-DG	420	3188
Freight density improvement	39%	17%

1. P. Anastas and J. Wagner, "Green Chemistry: Theory and Practice," Oxford University Press: New York, 1998.

2. Representative data

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