

Specification

**TRItidy G™**

**A4051**

<b>Physical Description:</b>	Liquid
<b>Product Code:</b>	A4051
<b>Product Name:</b>	TRItidy G™
<b>Short Description:</b>	additional product description: <i>Ready-to-use</i> - solution for simultaneous isolation of RNA, DNA and proteins
<b>Headline Comment:</b>	* TRItidy G™ is a registered trademark of AppliChem GmbH.
<b>Specifications:</b>	<ul style="list-style-type: none"> <li>: • mono-phasic reagent (contains phenol and guanidinium thiocyanate)</li> <li>: • suited for small and large samples</li> <li>: • for samples of human, animal, plant and bacterial origin</li> <li>: • isolation of intact total RNA from tissue and cells, sequential precipitation of DNA and protein</li> <li>: • improved version of the 'single-step' RNA-isolation method developed by Chomczynski &amp; Sacchi</li> <li>: • isolation of large and small RNA-species (0.1 - 15 kb) with high purity</li> </ul>
<b>Hazard pictograms</b>	
<b>UN:</b>	2821
<b>Class/PG:</b>	6.1/II
<b>ADR:</b>	6.1/II
<b>IMDG:</b>	6.1/II
<b>IATA:</b>	6.1/II
<b>WGK:</b>	2
<b>Storage:</b>	2-8°C

**AppliChem GmbH**

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	protected from light under argon
<b>Signal Word:</b>	Danger
<b>GHS Symbols:</b>	GHS05 GHS06 GHS08
<b>H Phrases:</b>	EUH032 H302 H311+H331 H314 H341 H412
<b>P Phrases:</b>	P280 P301+P330+P331 P302+P352 P308+P313
<b>CS:</b>	38220000
<b>Comment</b>	The simultaneous isolation of RNA, DNA and proteins from biological samples has been introduced by Chomczynski (1) and improved by others. Chomczynski's method is based on the isolation of non-degraded nucleic acids (RNA and DNA) with guanidinium salts and phenol (e. g. ref. 2-5). <b>TRItidy G™</b> is a reagent, based on the Chomczynski method (1), with additional modifications to improve the purity of the RNA, DNA and proteins. First, the RNA will be selectively retained in the aqueous phase during the acidic GuaSCN/Phenol extraction, while DNA and proteins stay in the organic phase and interphase, respectively (6). The DNA is isolated from the interphase/organic phase by a simple ethanol precipitation and proteins can be isolated from the remaining organic phase.

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### Bibliography

(1)Chomczynski, P. (1993) *BioTechniques* **15**, 532-537A single-step purification method for RNA, DNA and proteins from cell and tissue samples. (2)Cox, R.A. (1968) *Methods Enzymol.* **12 Part B**, [103a] 120-129The use of guanidinium chloride in the isolation of nucleic acids. (3)Kirby, K.S. (1968) *Methods Enzymol.* **12 Part B**, [98] 87-99Isolation of nucleic acids with phenolic solvents. (4)MacDonald, R.J. *et al.* (1987) *Methods Enzymol.* **152**, 219-227Isolation of RNA with guanidinium salts. (5)Feramisco, J.R. *et al.* (1982) *J. Biol. Chem.* **257**, 11024-11031Modification of the GTC-Method for the RNA isolation according to Chirgwin. (6)Wallace, D.M. (1987) *Methods Enzymol.* **152**, 33-41Large and small scale phenol extraction. (7)Chomczynski, P. & Mackey, K. (1995) *Anal. Biochem.* **225**, 163-164Substitution of chloroform by bromochloropropane in the Single-step method of RNA-isolation (8)Chomczynski, P. & Mackey, K. (1995) *BioTechniques* **19**, 942-945Modification of the TRI Reagent procedure for isolation of RNA from polysaccharide- and proteoglycan-rich sources. (9)Monstein, H.-J. *et al.* (1995) *BioTechniques* **19**, 340-344RNA extraction from gastrointestinal tract and pancreas by a modified Chomczynski and Sacchi method. Additional references are available on request from AppliChem!