

# PP796 Emetic

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syngenta

Confidential Business Information

TM

SYNG-PQ-37247322\_R

## PP796 Brief History

- 1973 investigated by ICI as pharmaceutical emetic
- 1977 Submission of data on PP796
- 1981 EPA grants tolerance exemption at request of Chevron to allow PP796
- 1987 EPA maintained requirement for emetic in paraquat manufacturing and end-use products
- 1994 Appendix A: The Emetic PP796 (EU MII Section III 1995) provides summary of the toxicity data on PP796
- 1997 EPA RED indicates that registrants include emetic to induce vomiting
- 2004 PP796 – Toxicology Summary (Internal Document)
- 2005 (June) Syngenta petitions to increase tolerance from 0.1 to 0.3% wt:wt
- 2005 (August) EPA approves increased tolerance to 0.3% wt:wt

## FAO Specification For Paraquat

“An effective emetic, having the following characteristics, must be incorporated into the TK.

- It must be rapidly absorbed (more rapidly than paraquat) and be quick acting. Emesis must occur in about half an hour in at least 50% of cases.
- It must be an effective (strong) stimulant of the emetic centre of the brain, to produce effective emesis. The emetic effect should have a limited ‘action period’, of about two to three hours, to allow effective treatment of poisoning.
- It must act centrally on the emetic centre in the brain.
- It must not be a gastric irritant because, as paraquat is itself an irritant, this could potentiate the toxicity of paraquat.
- It must be toxicologically acceptable. It must have a short half-life in the body (to comply with the need for a limited action period).
- It must be compatible with, and stable in, the paraquat formulation and not affect the herbicidal efficacy or occupational use of the product.

To date, the only compound found to meet these requirements is 2-amino-4,5-dihydro-6-methyl- 4-propyl-s-triazole-(1,5a)pyrimidin-5-one (PP796).

PP796 must be present in the TK (technical concentrate) at not less than 0.8 g/l.

PP796 must be present in the SL (soluble concentrate) at not less than 0.23% of the paraquat ion content.”

# Syngenta Paraquat Products

Description	Paraquat Content (PQ+/volume)		Emetic Content (PP796)	FAO Specification (PP796)	PQ+ / PP796 Ratio	EPA Closed System Requirement
Paraquat Concentrate ES	3.1 lb/gal	371 g/L	2.4 g/L	0.8 g/L <sup>A</sup>	0.00647	NA
Gramoxone SL 2.0 EPA Reg. No. 100-1431	2 lb/gal	240 g/L	1.5 g/L	0.552 g/L <sup>B</sup>	0.00625	Currently not required. Will be compliant as required by EPA mandated dates.
A12202F 160 g PQ+;240 g SMOC/L 100-RAUR (pending)	1.3 lb /gal	160 g/L	1 g/L	0.368 g/L <sup>B</sup>	0.00625	Yes
A12837AM 360 PQ+ g/L 100-RALE (pending)	3 lb /gal	360 g/L	2.25 g/L	0.828 g/L <sup>B</sup>	0.00625	Yes

- A. FAO specification 56.302/TK (2003): PP796 must be present in the TK (technical concentrate) at not less than 0.8 g/L of the paraquat ion content.
- B. FAO specification 56.302/SL (February 2008): PP796 must be present in the SL (soluble concentrate) at not less than 0.23% of the paraquat ion content.