

Evaluation Report for Category B, Subcategory 1.2 Application

Application Number: 2014-5853
Application: New Source of Technical Grade Active Ingredient by a New Registrant
Product: Diquat Dibromide Technical Concentrate
Registration Number: 32360
Active ingredients (a.i.): diquat
PMRA Document Number: 2653703

Purpose of Application

The purpose of this application was to register a new source of the active ingredients, diquat, by a different Registrant.

Chemistry Assessment

Common Name: Diquat
IUPAC* Chemical Name: 6,7-dihydrodipyrido[1,2-*a*:2',1'-*c*]pyrazine-5,8-dium
CAS† Chemical Name: 6,7-dihydrodipyrido[1,2-*a*:2',1'-*c*]pyrazinedium

* International Union of Pure and Applied Chemistry

† Chemical Abstracts Service

Diquat Dibromide Technical Concentrate has the following properties:

Property	Result
Colour and physical state	Brown liquid
Nominal concentration	Diquat ion, present as diquat dibromide ... 22.0%
Odour	Aromatic
Specific gravity	1.231 at 20°C
Vapour pressure	1.83×10^{-2} mPa (at 25°C)
pH	4.5 – 5.5
Solubility in water	508.19 g/L (20°C, pH 4.22)

Property	Result
n-Octanol/water partition coefficient	Log K _{ow} = -2.58

The required chemistry data for Diquat Dibromide Technical Concentrate have been provided, reviewed, and found to be acceptable.

Health and Environmental Assessment

As the new source of diquat is chemically equivalent to the registered source, the health and environmental risk profiles are expected to be similar to that of the product used to determine chemical equivalence. No additional assessments were required.

Value Assessment

A value assessment is not required for technical grade active ingredient products.

Conclusion

The PMRA has completed an evaluation of the subject application and has determined that it can support the registration of Diquat Dibromide Technical Concentrate.

References

PMRA Document Number	Reference
2481570	2014, Chemistry-2.1-2, 2.3-1,2.4-9,2.12.1, 2.14.1-4,2.14.12-Diquat TGAI-28november2014, DACO: 2.1,2.14.1,2.14.12,2.14.2,2.14.3,2.14.4,2.2,2.3,2.3.1,2.4,2.5,2.6,2.7,2.8,2.9 CBI
2481572	2012, FORMATION OF IMPURITIES Diquat dibromide technical concentrate, DACO: 2.11.4 CBI
2481574	2013, Diquat Dibromide TK Manufacture Process and Synthesis Pathway, DACO: 2.11.1,2.11.2,2.11.3 CBI
2481575	2012, Diquat Dibromide TK Formation of Impurities, DACO: 2.11.4 CBI
2481584	2013, DIQUAT DIBROMIDE TK Preliminary Analysis, DACO: 2.13.1,2.13.2,2.13.3,2.13.4 CBI
2481585	2010, Diquat Dibromide Dissociation Constant, DACO: 2.14.10
2481586	2010, Octanol Water Partition Coefficient (Octanol/water) of Diquat Dibromide DK, DACO: 2.14.11
2481587	2010, Diquat Dibromide Oxidizing Properties and Effect on Metals and Packaging Materials, DACO: 2.14.13
2481588	2010, Diquat Dibromide Determination of pH and Stability in Water at Three Diferent pH Levels, DACO: 2.14.15,830.7000
2481589	2011, Boiling Point of Diquat Dibromide DK, DACO: 2.14.5
2481590	2010, Diquat Dibromide Density Determination, DACO: 2.14.6
2481591	2011, Solubility in Water and Organic Solvents of Diquat Dibromide DK, DACO: 2.14.7,2.14.8
2481592	2010, Vapour Pressure of Diquat Dibromide DK, DACO: 2.14.9
2518246	2014, Original Data of [CBI removed], DACO: 2.13.1 CBI
2624820	2016, Chemistry-2.11.3-nanjing-10feb2016-ann tillman, DACO: 2.11.3 CBI
2624821	2016, Chemistry-2.13.3-Diquat TGAI-10feb2016-deficiency nanjing, DACO: 2.13.3 CBI

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