

## Evaluation Report for Category L, Subcategory 1.1 Application

**Application Number:** 2019-4103  
**Application:** Submissions Subject to *Protection of Proprietary Interests in Pesticide Data* (PIIP) Policy  
**Product:** Lier Diquat Technical  
**Registration Number:** 33895  
**Active ingredient (a.i.):** Diquat, present as diquat dibromide  
**PMRA Document Number :** 3111759

### Purpose of Application

The purpose of this application was to register Lier Diquat Technical, a new source of Diquat, present as diquat dibromide, based on a precedent.

### Chemistry Assessment

Common Name: Diquat-dibromide  
 IUPAC\* Chemical Name: 9,10-dihydro-8*a*,10*a*-diazoniaphenanthrene dibromide  
 CAS† Chemical Name: 6,7-dihydrodipyrido[1,2-*a*:2',1'-*c*]pyrazinediium dibromide

\* International Union of Pure and Applied Chemistry

† Chemical Abstracts Service

Lier Diquat Technical has the following properties:

Property	Result
Colour and physical state	Brown solution
Nominal concentration	Diquat, present as diquat dibromide at 21.73%
Odour	Characteristic
Density	1.2171 g/L
Vapour pressure	$9.74 \times 10^{-3}$ mPa at 25°C
pH	4.09
Solubility in water	796.08 g/L
n-Octanol/water partition coefficient	$\log K_{ow} = -2.612$

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

## Health, Environmental and Value Assessments

Health, environmental and value assessments were not required for this application.

## Conclusion

The Pest Management Regulatory Agency has completed an assessment of the information provided, and has found the information sufficient to support the registration of Lier Diquat Technical.

## References

PMRA Document Number	References
3024019	2017, Physical State, Appearance, Color, and Odor of diquat dibromide 40% TK, DACO: 2.14.1, 2.14.2, 2.14.3.
3024020	2017, Boiling point of diquat dibromide 40% TK, DACO: 2.14.5.
3024021	2017, Determination of the density of diquat dibromide 40% TK, DACO: 2.14.6.
3024022	2018, Solubility in water and two organic solvents (Acetone, n-Hexane) of diquat dibromide 40% TK, DACO: 2.14.7, 2.14.8.
3024023	2018, Vapor pressure of diquat dibromide 40% TK, DACO: 2.14.9.
3024024	2017, Dissociation constant in water of diquat dibromide 40% TK, DACO: 2.14.10.
3024025	2017, Partition coefficient (N-octanol/water) of diquat dibromide 40% TK, DACO: 2.14.11.
3024026	2017, UV-VIS Absorption Spectra of diquat dibromide 40% TK, DACO: 2.14.12.
3024029	2018, Stability of diquat dibromide 40% TK to normal and elevated temperatures, metals and metal ions, DACO: 2.14.13.
3024030	2018, Accelerated storage stability and corrosion characteristics of diquat dibromide 40% TK, DACO: 2.14.14.
3024031	2019, Certificate of analysis, DACO: 2.14.15, 830.7000.
3024017	2018, Manufacturing process, DACO: 2.11.3, 2.11.4 CBI
3024018	2018, Preliminary analysis, enforcement analytical method & qualitative and quantitative profile of the test substance diquat dibromide 40% TK. (Five batch analysis) DACO: 2.13, 2.13.1, 2.13.2, 2.13.3, 2.13.4 CBI.
3024029	2018, Stability of diquat dibromide 40% TK to normal and elevated temperatures, metals and metal ions DACO 2.14.13.
3105354	2017, Analytical method for Lier Diquat Technical 5-batch, DACO: 2.13.3.
3105355	2020, Declaration of batch for Lier Diquat Technical, DACO: 2.13.3

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