

DOXA

CHEMISTRY ENVISIONED

Spredox D-363 Evaluation

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- Spredox D-363 is a polymeric dispersant developed for UV ink, can be used in all types of toner and has excellent dispersion stability.
- The purpose of this report is to evaluate the effectiveness of Spredox D-363 in printing ink application, and test the performance and stability with different pigments and detect its rheological properties and stability.
- **D-363's performance will be compared against that of a competitor**

Introduction

Spredox D-363 Evaluation

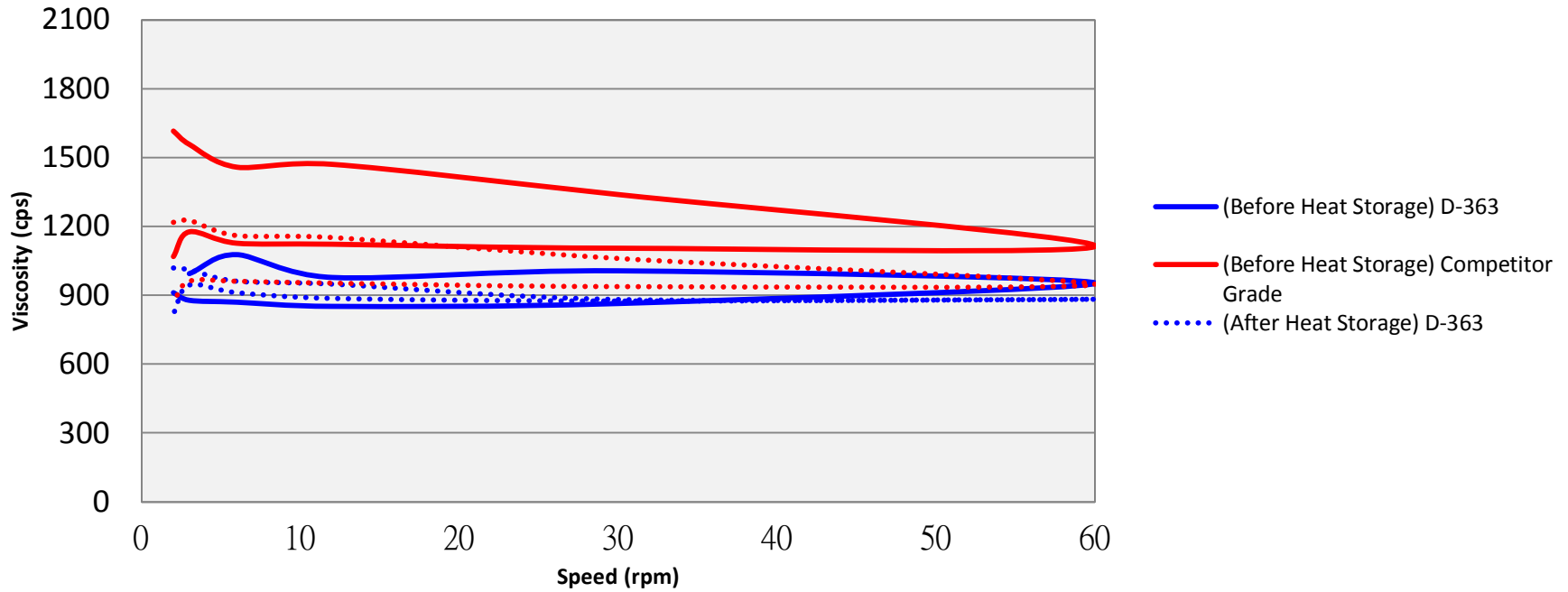
UV flexo **system**

	Green 7	Red 122	Violet 2300R	Special 250
Dispersing Agent(100%)	4.8	1.9	2.4	2.4
BYK-SYNERGIST 2102	0.5	-	-	-
M3130	45.0	45.0	-	-
M4004			50.5	44.5
PS643	28.0	28.0	-	-
Ebecryl 3420	-	-	24.5	24.5
Pigment	16.0	16.0	12.0	18.0
Stabilizing Agent	0.5	0.5	0.5	0.5
Letdown formulation				
Doxflow RC-500	0.6	0.6	0.6	0.6
IRGACURE PBZ	3.0	3.0	3.0	3.0
IRGACURE 369	5.0	5.0	5.0	5.0
IRGACURE EPD	-	-	1.5	1.5

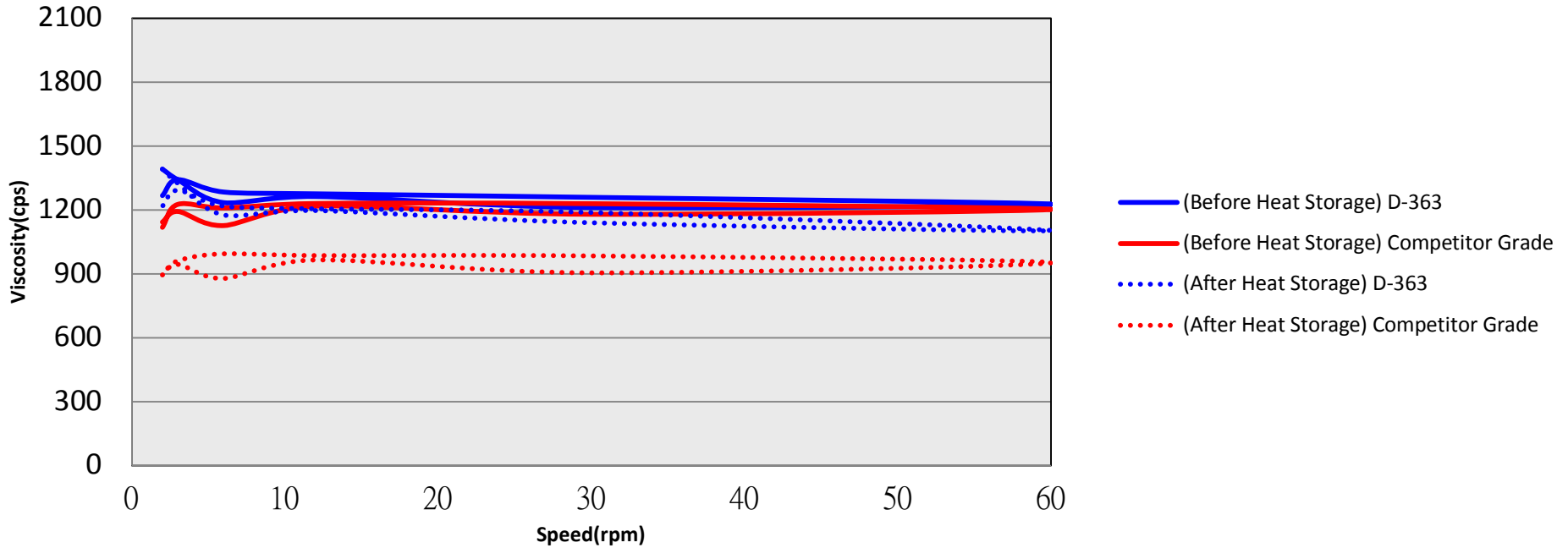
Test Formulation

- Grinding: Add glass beads (equal to 70-100% of the weight of the millbase) and grind for one hour in the Red Devil Shaker
- **Test viscosity changes with rheometer**

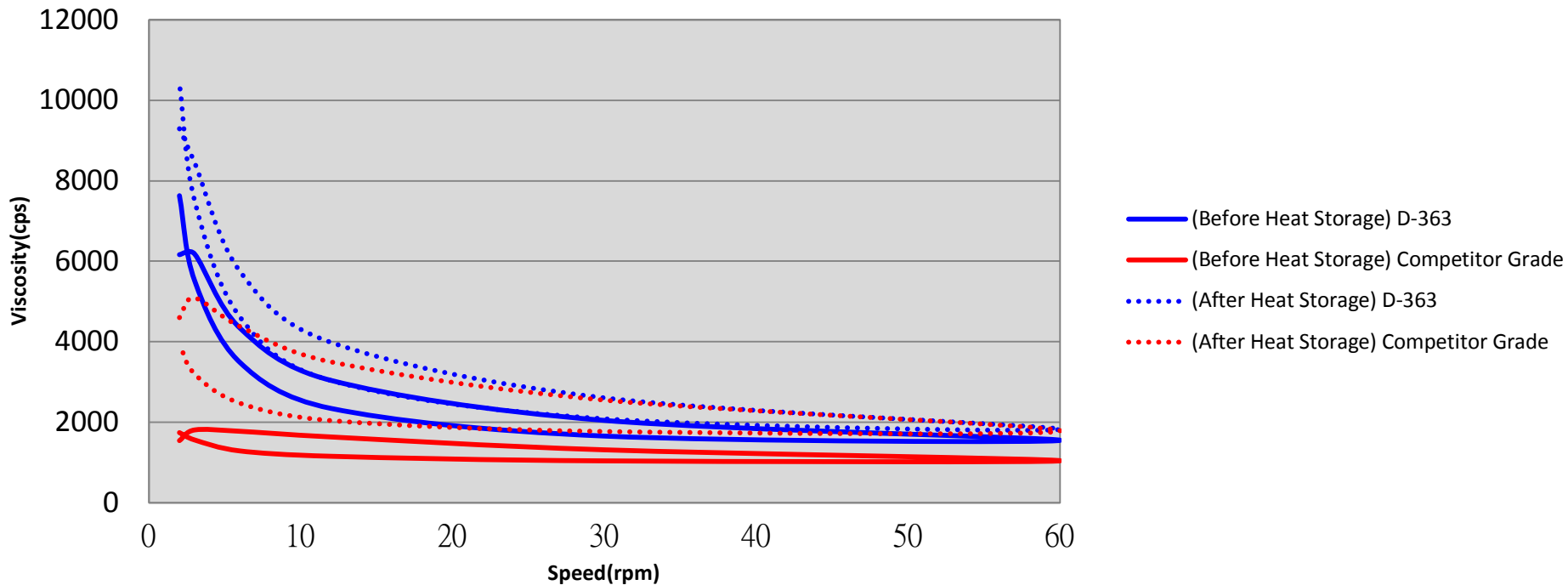
Methodology



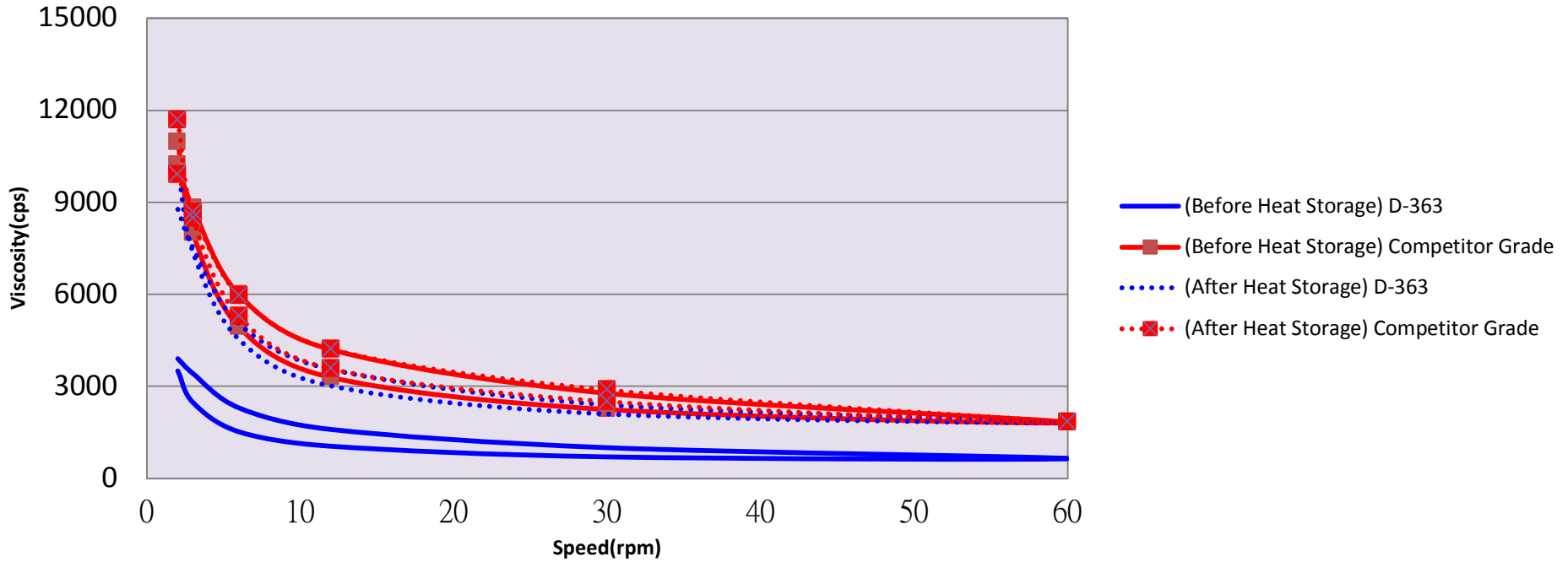
Viscosity (CPS) – Green 7



Viscosity (CPS) – Special 250



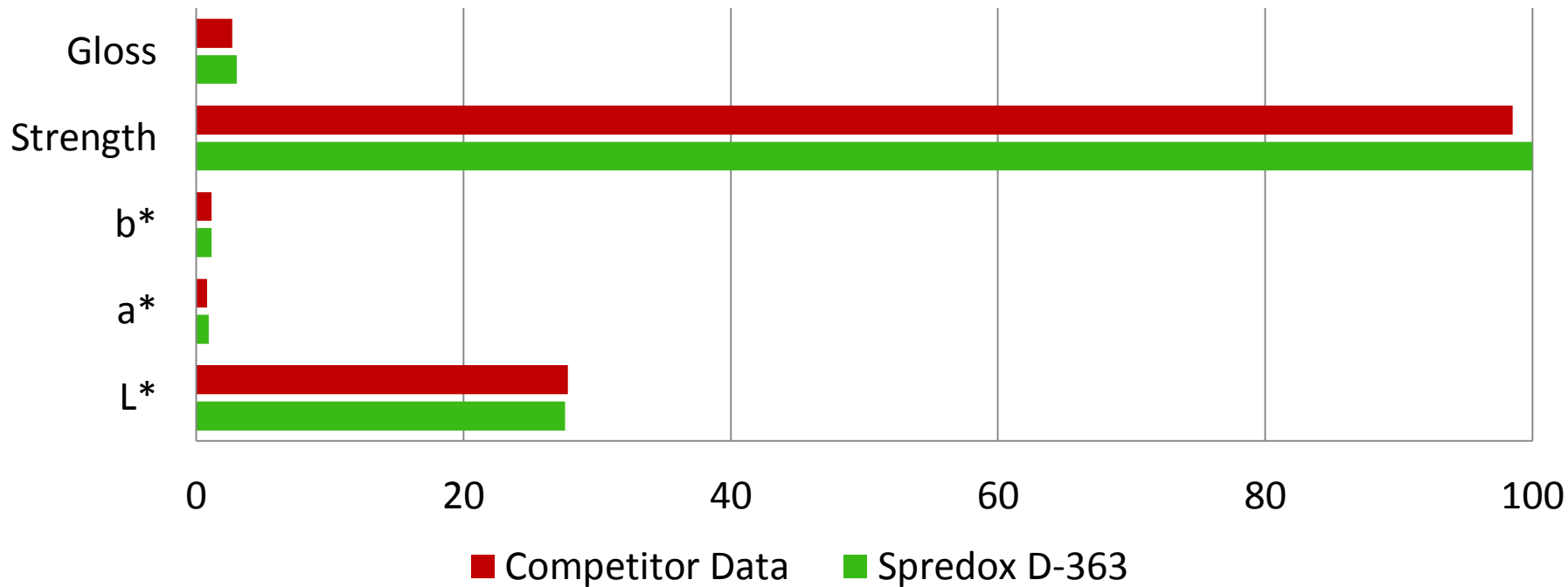
Viscosity (CPS) – Red I22



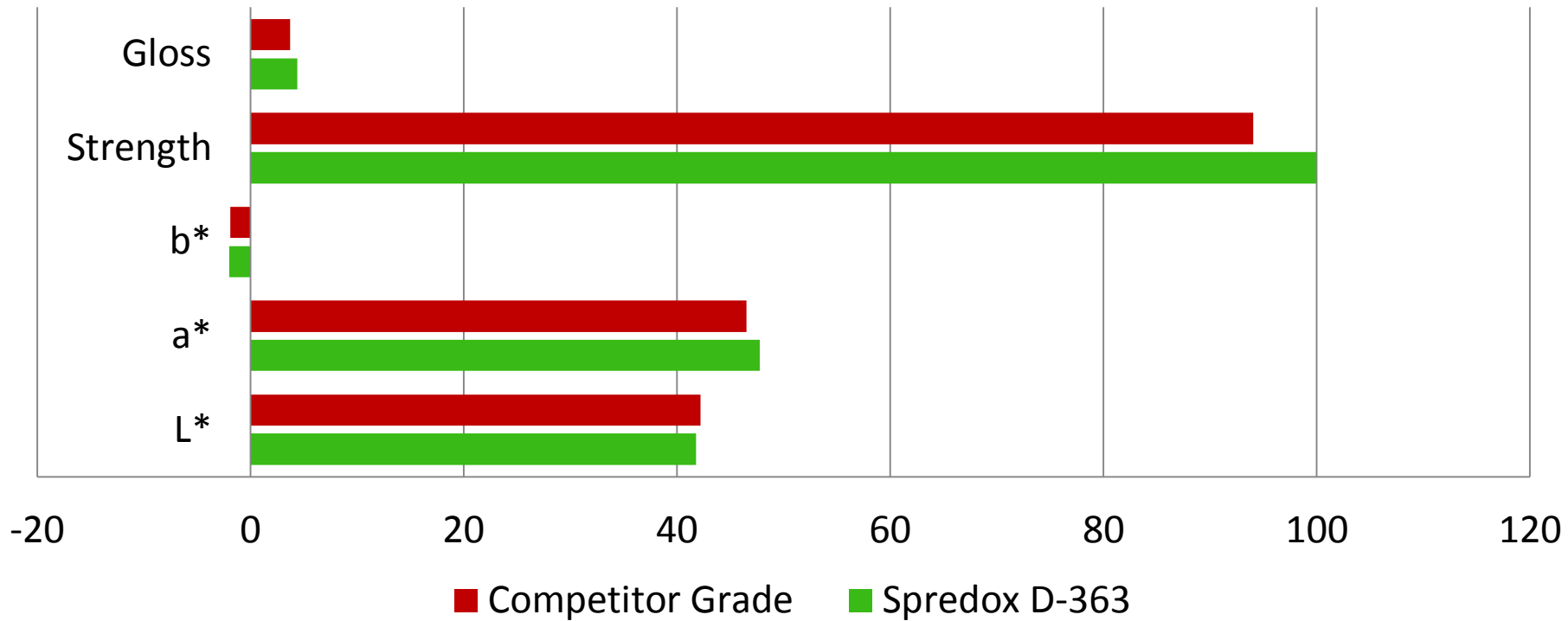
Viscosity (CPS) – Violet 2300R



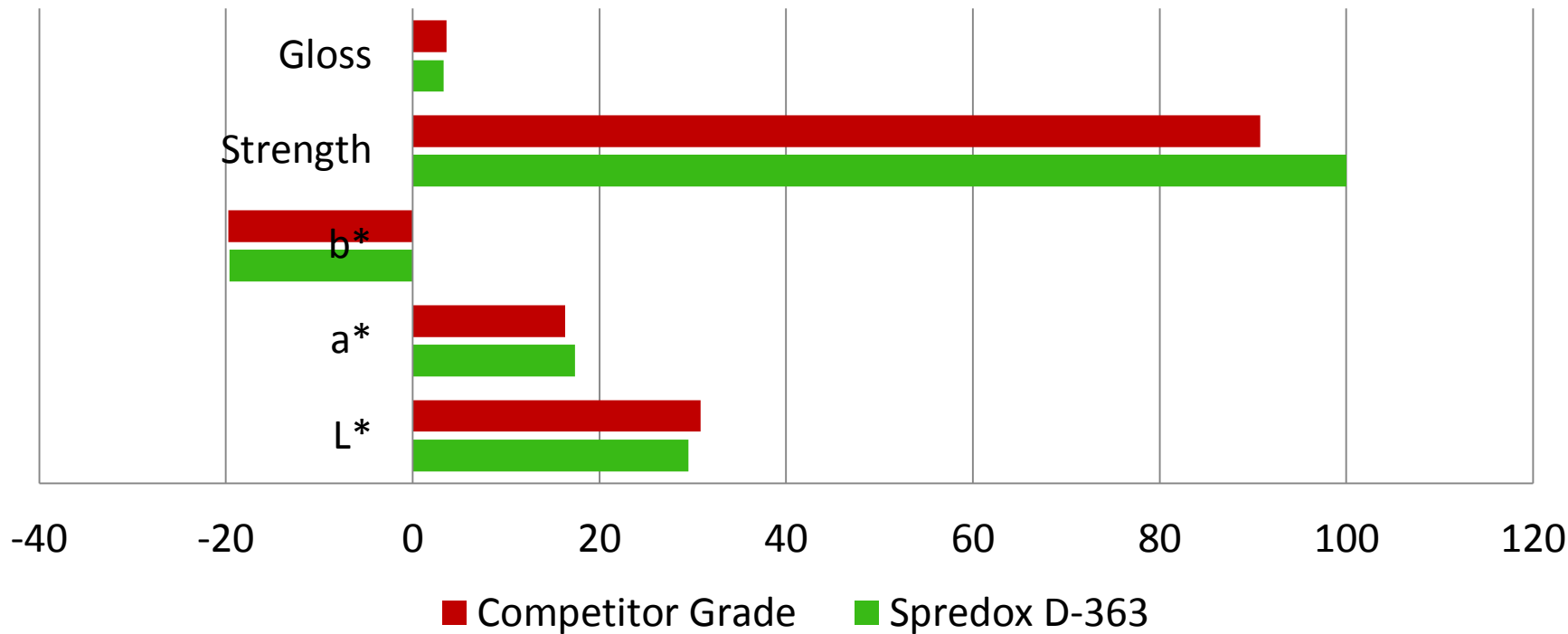
Color Strength – Green 7



Color Strength-Special 250



Color Strength - Red I22



Color Strength - Violet 2300R

- Disperbyk 2013 ◦ With Green 7 and Special 250, Spredox D-363 provides excellent rheological properties and in-can stability, and also provides somewhat superior viscosity reduction than Disperbyk 2013.
- Drawdowns show that with Violet 2300R and Red 122, Spredox D-163 provides excellent color density and reveals the natural brightness of color.

Results and Discussion
