



MAINTAIN A POSITIVE MOOD,
IMPROVE OCCASIONAL STRESS
AND SLEEPLESSNESS^{1-9*}

affron[®]

Unlock your potential

PHARM[△]ACTIVE
BIOTECH PRODUCTS

Features

- Premium-grade saffron, meticulously selected for excellence.
- Standardized to $\geq 3.5\%$ Lepticrosalides[®] by HPLC-DAD.
- Well-tolerated: No side effects have been reported in +600 participants^{1-9*}.
- High stability.
- 100% vertically integrated.
- Halal and Kosher certified.



+4 million people worldwide benefit from affron[®] to maintain a positive mood and mental balance every day*

Differentiated value

- International Patent US2019099464A1.
- 9 clinical studies¹⁻⁹.
- Most clinically backed saffron ingredient worldwide*.
- Most awarded saffron ingredient worldwide*.
- Unique dose-response study in 128 healthy adults^{2*}.
- 1st saffron extract clinically studied in adolescents^{4*}.
- Proven bioavailability (pharmacokinetics study)^{9*}.
- Rapid absorption in 1 hour^{10*}.
- Lowest dosage: 14mg twice daily .
- Made in Spain. Own extraction plant.
- Patented *AFF[®]ON COOL-Tech* extraction technology, which uniquely concentrates and preserves the actives in a natural way.

BEST NATURAL ALTERNATIVE TO		
Mental balance ^{1-9*}	Supportive for menopausal women ^{7*}	Helps promote restorative sleep ^{3,6,8*}

Bioactive compounds: Lepticrosalides[®]

Affron[®] is standardized to $\geq 3.5\%$ **Lepticrosalides[®]**, a complex of bioactive compounds responsible for the beneficial and organoleptic properties of **affron[®]**. They have shown to improve mood in healthy consumers with occasional stress, low mood and sleeplessness^{1-9*}.

They are analysed by the high-reliable technique: HPLC-DAD, which is more precise than the traditional ISO3632 (2003), and which distinguishes between molecular isomers and enables detection of adulteration.

Affron® improves mental outlook^{2*}

In a randomized, double-blind, placebo-controlled study **affron**® intake for 4 weeks, showed signs of improved mood and alleviated occasional stress or tension related anxieties and associated fatigue^{2*}. **Affron**® intake was well tolerated and no associated side effects were noted^{2*}.

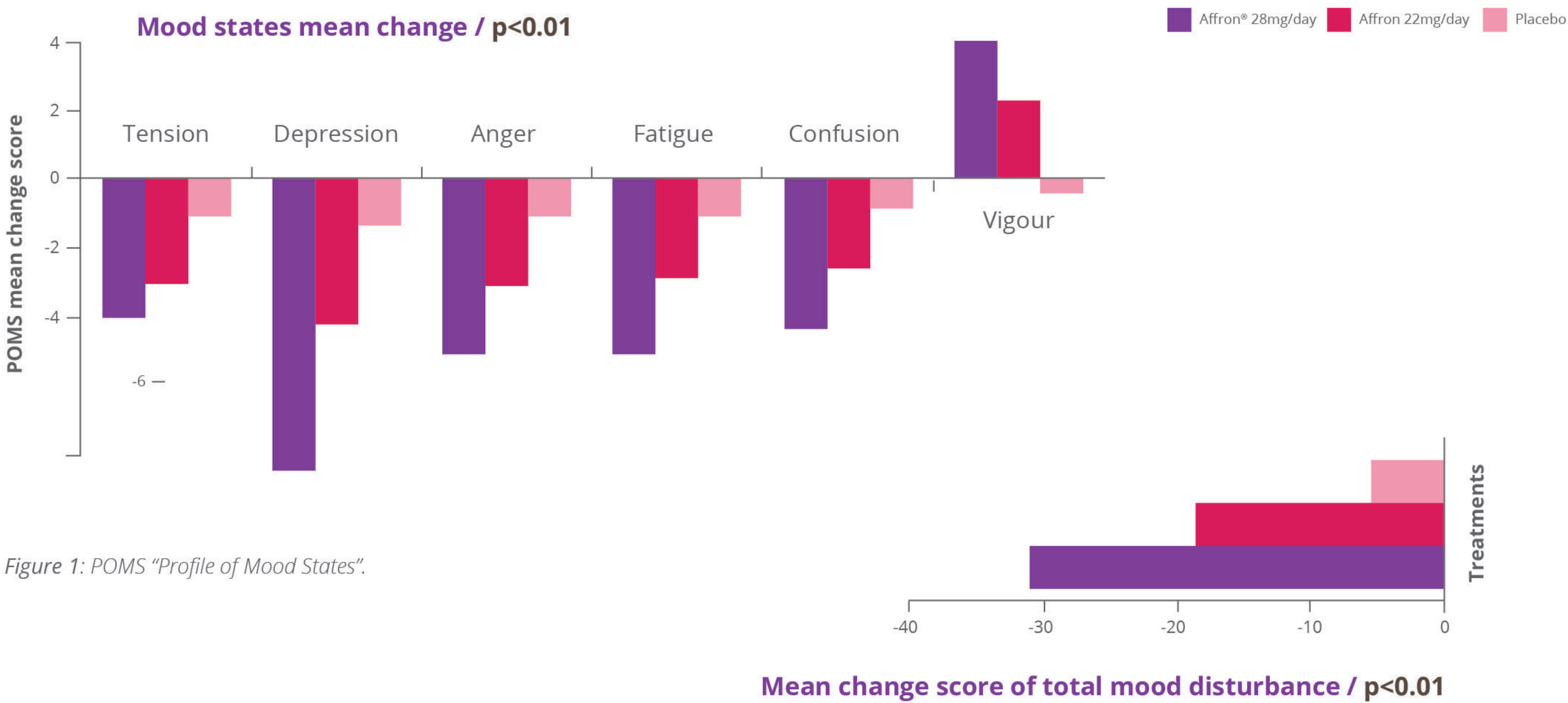


Figure 1: POMS "Profile of Mood States".

Figure 2: Mean change score of total mood disturbance after 4 weeks of treatment.

Affron® evidence in adolescents

In a randomised, double-blind, placebo controlled study (N=68) the administration of **affron**® for 8 weeks showed signs of improved occasional stress and low mood symptoms in adolescents (12 16 years old) with mild-to-moderate symptoms, from the perspective of the adolescent.

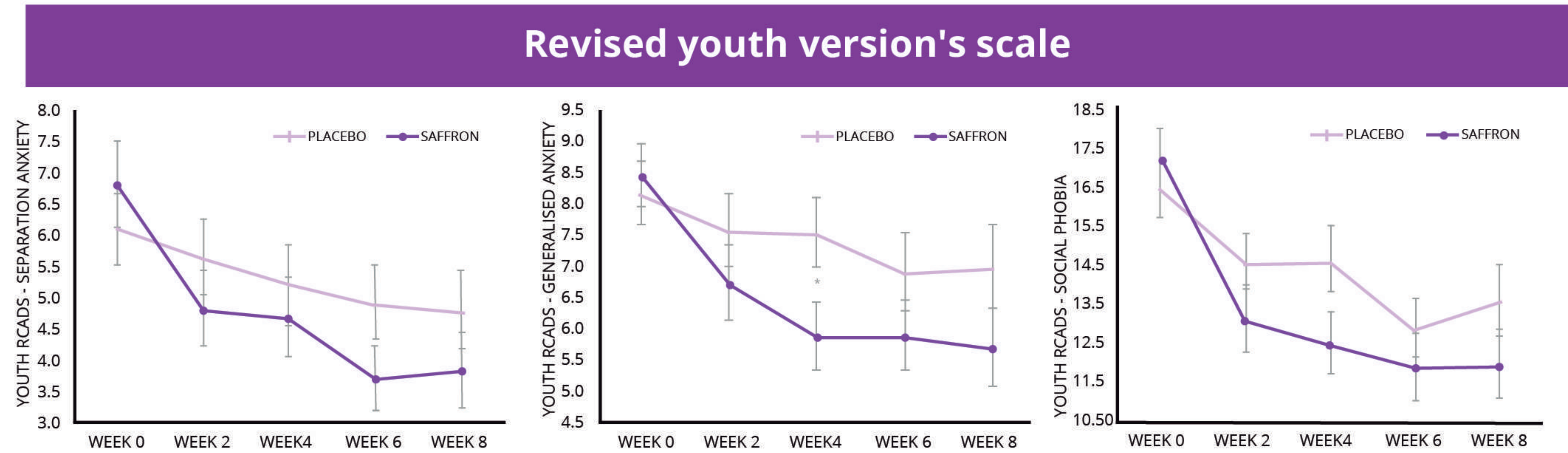


Figure 3: Change in RCADS Youth raw scores over 8 week intervention(*)p < 0.05;(**)p < 0.01.

Affron® supports menopause symptoms^{7*}

In a randomized, double-blind, placebo-controlled study (N=128) **affron® intake of 28mg/day** for 12 weeks, significantly **improved** the **psychological aspects** of the Greene Climacteric Scale (GCS), characterized by:

- **33% reduction in occasional anxiety symptoms^{7*}.**
- **32% reduction in low mood and negative thoughts^{7*}.**

**affron®,
the ally your
mind needs**



Clinically proven to support occasional sleeplessness^{8*}

A new, randomized, double-blind, placebo-controlled study provided **further confirmation of the sleep-enhancing effects of 28 days of affron®** supplementation at 14 mg, 1 hour before bedtime, facilitating consumer's adherence^{8*}.

By the very first time, a single dose of **affron®** 1 hour before sleep revealed new possible mechanism of action influencing sleep hormones^{8*}.

Sleep Quality improvements after 4 weeks (PSD)

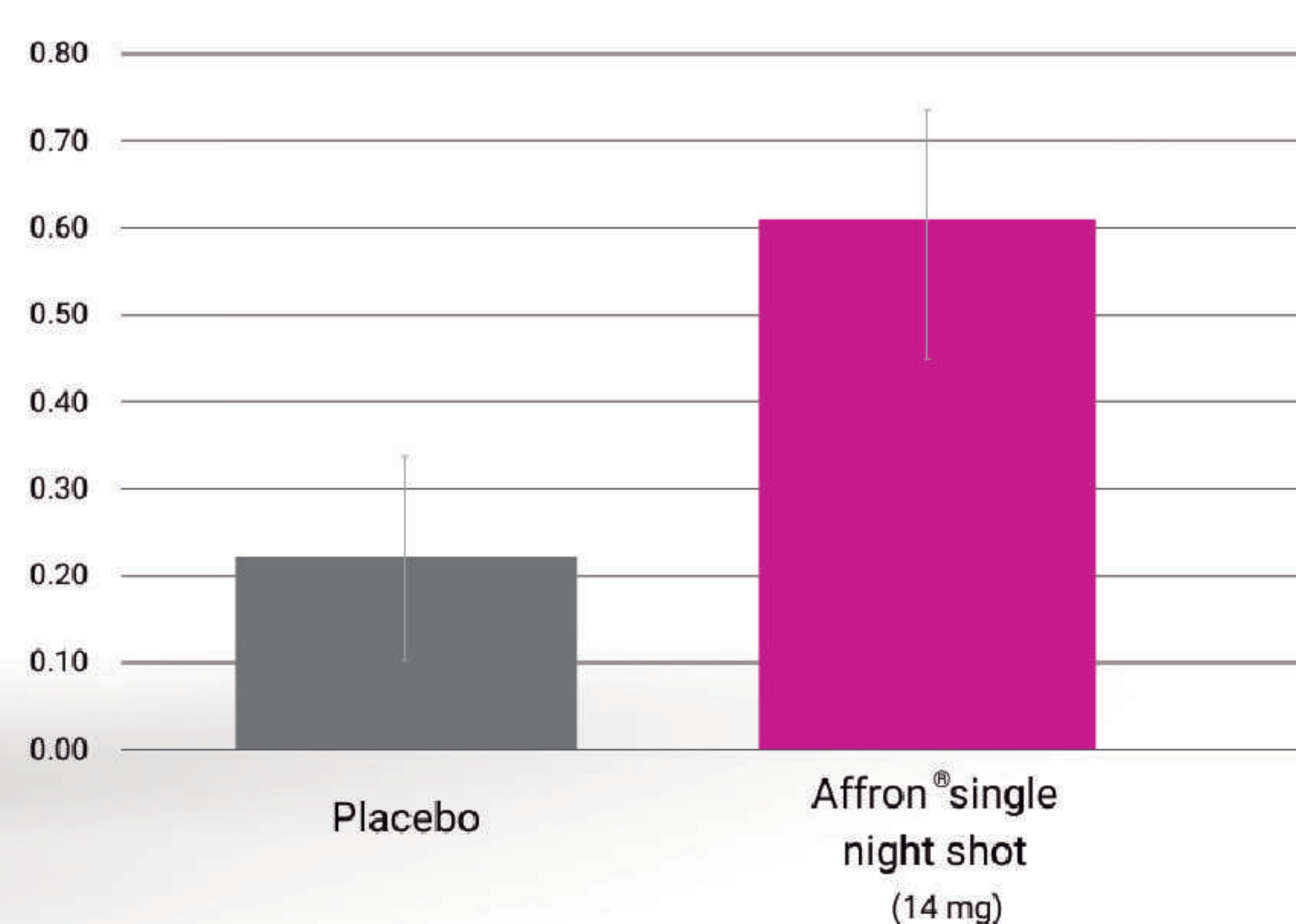


Figure 4: Changes in sleep quality ratings from baseline to week 4.

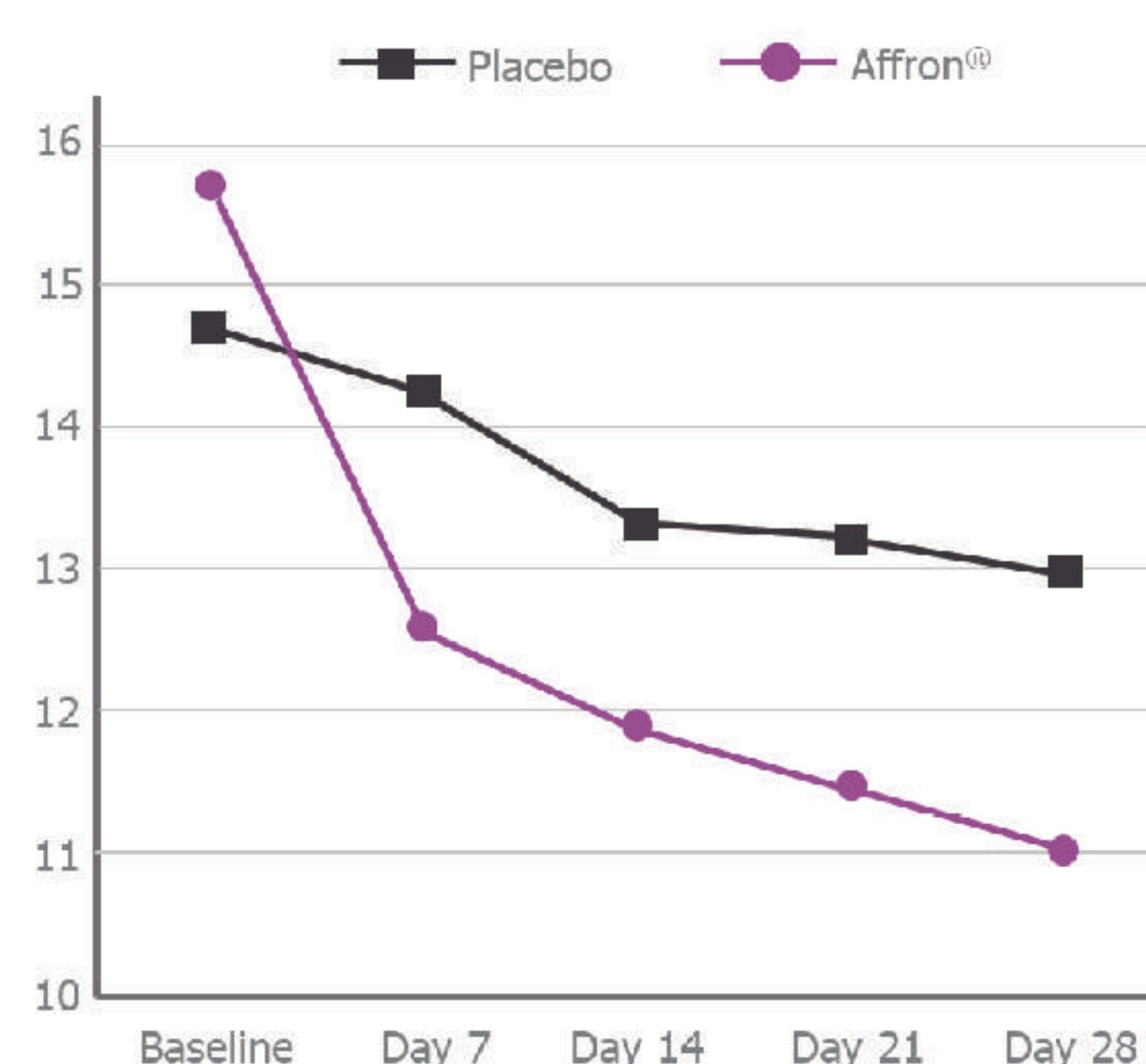
Affron® supports sleep quality and restorative sleep^{6*}

Affron® intake for 28 days was associated with **greater improvements** in:

- **Significant reduction of 25% of the Sleeplessness Severity Index Score.**
- **Significant increase of 20% of the Restorative Sleep Questionnaire (RSQ),** related to feeling more energized after awakening ($p \leq 0.05$)^{6*}.
- **Significant improvement** in alertness upon awakening (PS-Derry score) ($p \leq 0.05$)^{6*}.

Satisfaction ratings indicated that 96% of participants in the affron® group were satisfied with their tablet intake^{6*}.

Sleeplessness Severity Index Score



Restorative Sleep Questionnaire Score (RSQ)

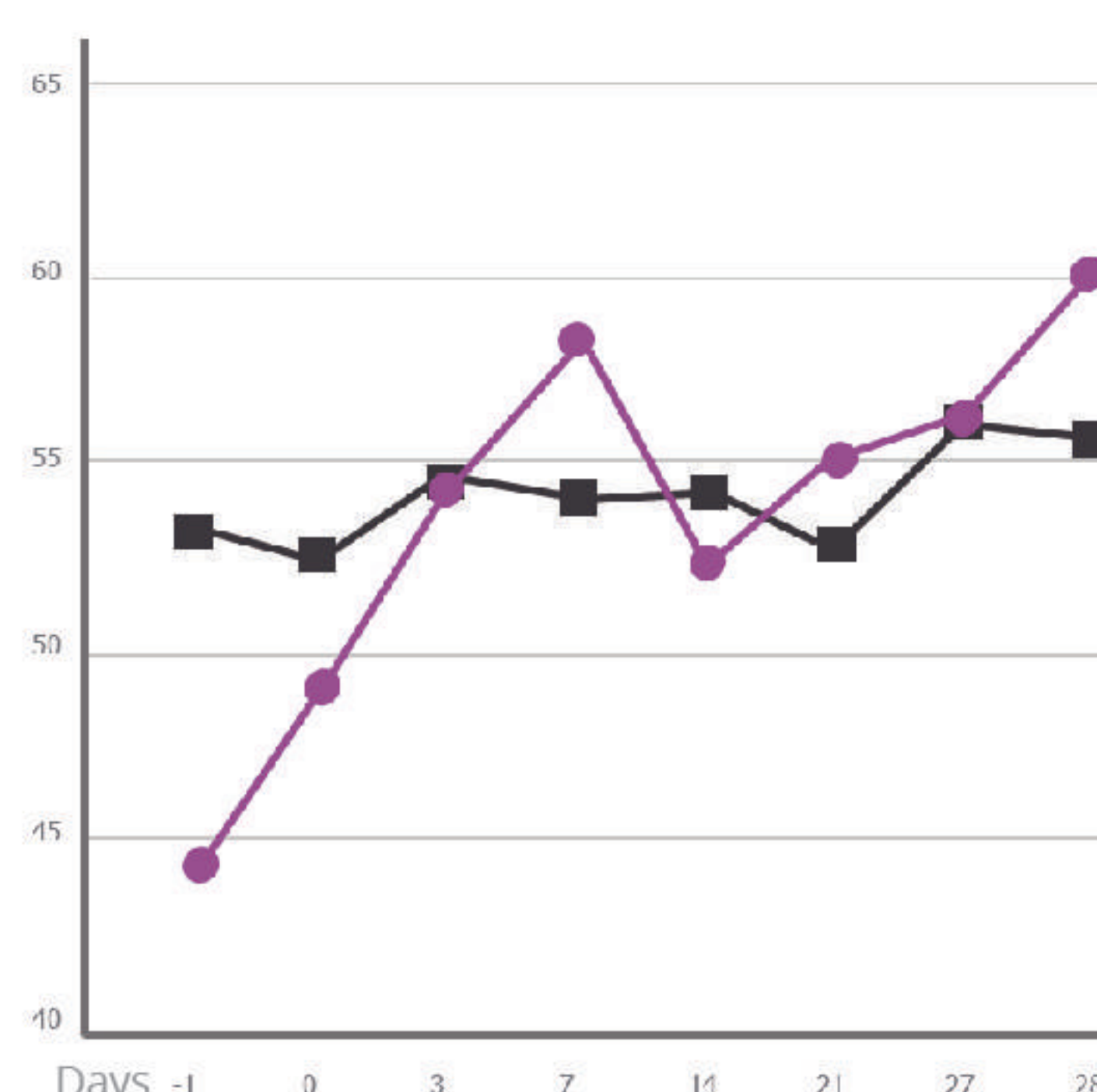


Figure 5: Changes in Sleeplessness Severity Index Score and Restorative Sleep Questionnaire.

Affron® stimulates endogenous melatonin production^{18*}

The reduction of kynurenine levels is explained by the fact that **affron®** acts by inhibiting key enzymes in the transformation of tryptophan into kynurenine^{18*}.

Affron® intake significantly enhances the presence of tryptophan available for the melatonin metabolic pathway^{18*}.

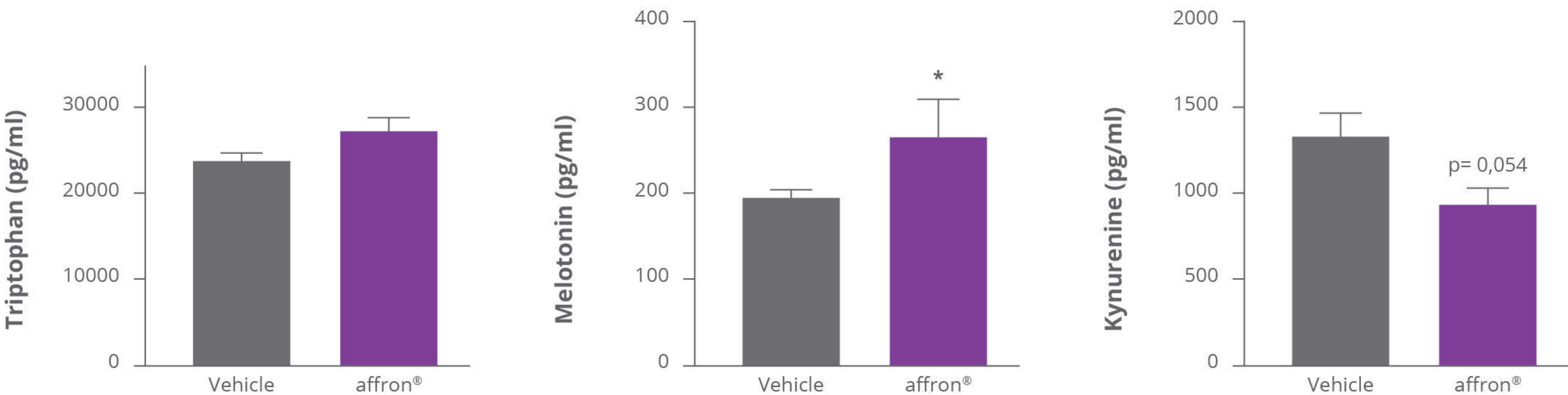


Figure 6: How tryptophan, melatonin and Kynurenine levels are affected by affron® intake.

Affron® main mechanisms of action^{10-18*}

OCCASIONAL STRESS AND LOW MOOD	▲ INFLAMMATORY RESPONSE	▼ NEUROTRANSMITTER IMBALANCE	AFFRON® IMPROVES MINDSET AND REDUCED OCCASIONAL STRESS
	▲	▼ OXIDATIVE STRESS	
	▼	▲ NEURONAL PLASTICITY	
SLEEPLESSNESS	▼	▲ MELATONIN	AFFRON® PROMOTE RESTFUL SLEEP
	▲	▼ KYNURENINE	

PROBLEMS

Low mood

Lost of memory

Low energy

Lack of sleep quality

Low mood

Lost of memory

Low energy

Lack of sleep quality

Elevate mood

Reduce occasional stress

Quality of life

Restorative sleep

PROVEN EFICACY

Claims**

MOOD & STRESS SUPPORT	RDD: 14mg x 2
<ul style="list-style-type: none">• Mental balance.• Stress management.• Improves mindset.• Improves mental outlook.• Support a healthy cortisol response and help maintain a positive mood.• Helps maintain a positive mood and support emotional well-being.• Supports emotional well-being and positive outlook.• Clinically studied to alleviate occasional stress and frustration.• Helps alleviate occasional stress, frustration and tension.• Encourages and helps maintain a positive mood.• Induce relaxation, improve occasional stress, frustration, and tension.• Maintain a positive mood, improve occasional stress and sleeplessness.• Supports Relaxation.	<ul style="list-style-type: none">• Supports relaxation and a calm mood.• Encourages Positive Mood• Supports a calm mood.• Alleviates occasional simple nervous tension.• Helps with nervousness due to common everyday overwork and fatigue.• A relaxed feeling.• Gently soothe away the tension.• Calmative.• Helps to support a relaxed feeling.• Helps in resolving that irritability that ruins your day.• Helps you relax.• Helps alleviate restlessness.• Helps to reduce nervous irritability.• May help maintain serotonin and dopamine levels already within a healthy range.

SLEEP SUPPORT

- Clinically proven to have a positive effect on occasional sleeplessness in 7 days.
- Clinically proven to promote restful sleep.
- Regulates healthy sleep/wake cycles.
- Improves alertness upon awakening.
- Helps you stay asleep through the night.
- Clinically proven to help you sleep in.
- Get a restorative sleep.
- Helps promote restorative sleep.

- Helps you fall asleep.
- Has a positive effect on occasional sleeplessness.
- Sleep better to address occasional sleeplessness.
- Healthy Sleep Cycle.
- Provide relief from occasional sleeplessness caused by stress and repetitive thoughts.
- Helps restore mental alertness or wakefulness after sleep.

MENOPAUSE SUPPORT

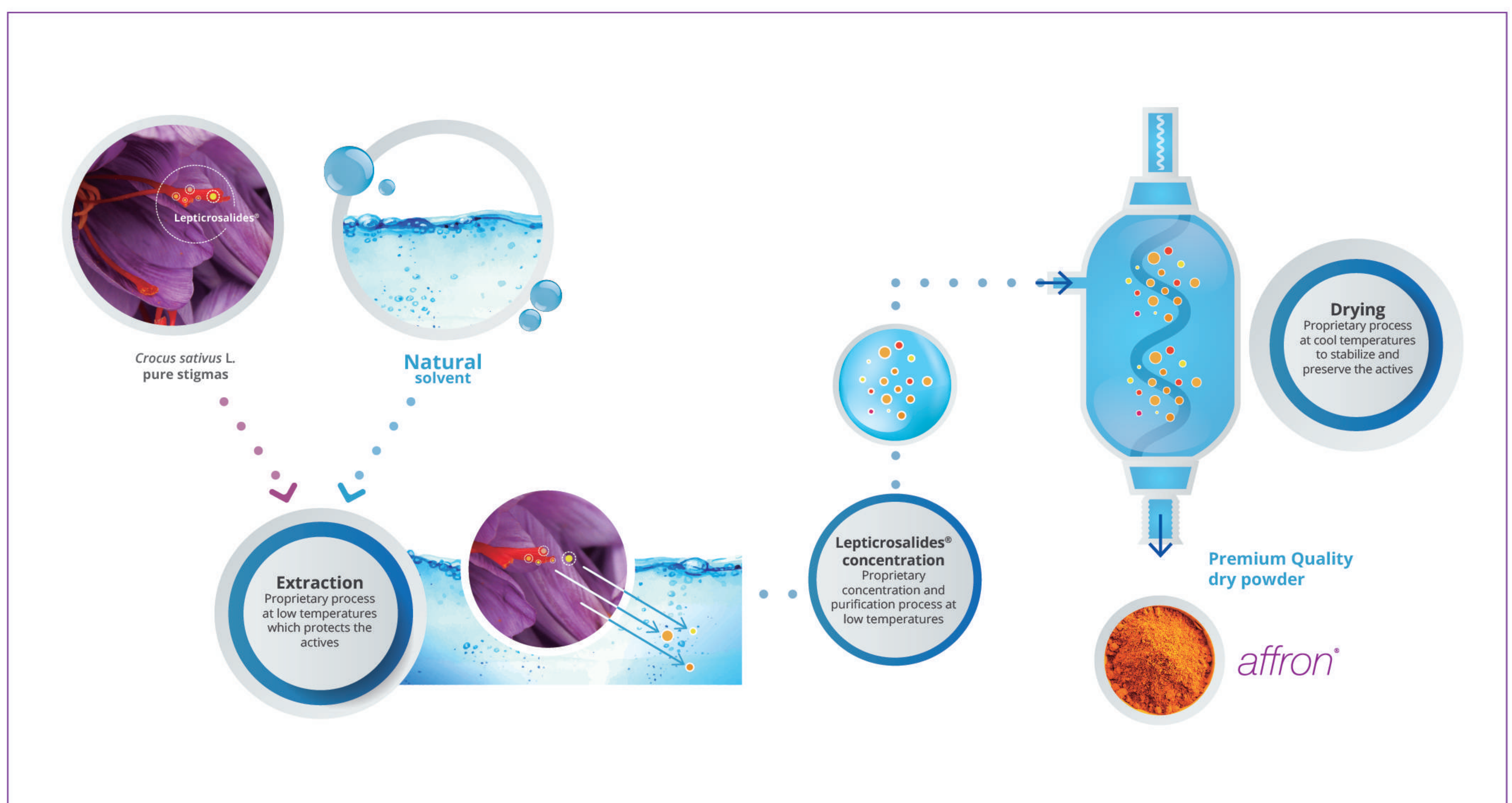
- Supportive for menopausal women.
- May improve mood on menopausal women.
- Contributes to relieve the menopause symptoms.

**Pharmactive Biotech Products SLU is not responsible for the claims made by its customers or the end customer.

AFF® ON Cool-Tech

It is a **patented, low-temperature production process** that creates **highly concentrated affron®** with long-lasting actives's stability. This technique allows us to get superior saffron Quality with **less industrial processing, less energy use and zero chemicals.**

AFF® ON COOL-Tech



Green technology for a Green label

The exclusive **AFF® ON Cool-Tech** process offers a significant advancement in our sustainability efforts as the process **uses less energy and this significantly reduces our carbon footprint.**

References

(1) Lopresti A., et al. *J Affect Disord.* 2017. 207: 188-196. (2) Kell G., et al. *Complement Ther Med.* 2017 Aug 33:58-64. (3) Nishide A., et al. *Jpn Pharmacol Ther.* 2018; vol. 46: 8. (4) Lopresti A., et al. *J Affect Disord.* 2018 May; 232:349-357. (5) Lopresti A., et al. *Journal of Psychopharmacology.* 2019. (6) Lopresti A., et al. *J Gin Sleep Med.* 2020 Feb14:10.5664/jcsm.8376. (7) Lopresti A., et al. *Journal of Menopausal Medicine.* 2021:27:1-13. (8) Lopresti A., et al. *J Sleep Medicine.* 86. 2021: 7-18. (9) Lopresti A., et al. *International Society of Sports Nutrition Journal,* 2022. (10) Paula Almodovar, et al. *Ilindawi, Evidence-Based Complementary and Alternative Medicine Volume 2020.* (11) Hosseinzadeh H., et al. *Phytother Res.* 2009 Jun; 23(6):768-74. (12) Georgiadou G., et al. *Neurosci Lett.* 2012 Oct; 18;528(1):27-30. (13) Mehri S., et al. *Iran.' Basic Med Sci.* 2015 Sep; 18(9): 902-908. (14) Oruc S., et al. *Life Sci.* 2016 Jun; 1;154:79-86. (15) Ghasemi T., et al. *Drug Res (Stuttg).* 65: 337-343. (16) Gao K., et al. *Exp Ther Med.* 18: 3775-3782. (17) Poma A., et al. 2012. *Antiinflamm Antiallergy Agents Med Chem.* 11: 37-51. (18) De la Fuente Muñoz, M; et Al. *Antioxidants* 2023, 12, 1619.

Other info

Shelf life: Three years*.
Non-GMO. Non-Irradiated.
MOQ: 1 Kg.
Water-soluble.
Multiple applications.
Accurate for food matrices.

Botanical info

Botanical name: *Crocus sativus* L.
Family: *Iridaceae*.
Common name: Saffron.
Part of the plant: Stigma.

Recommended daily dose

14 mg x2.



*When stored at room temperature, sheltered from light and moisture.

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