

1 เอกสารกำกับยาสำหรับแพทย์ฉบับภาษาอังกฤษ

2 **PRODUCT NAME**

3 ULTRACET®

4 (tramadol and paracetamol)

5 **DOSAGE FORMS AND STRENGTHS**

6 **Manufactured by Janssen-Korea Ltd.**

7 Light yellow, film-coated capsule-shaped tablet debossed: “JANSSEN” on one side and “T/A” on
8 the other.

9
10 **Manufactured by Janssen-Cilag SpA.**

11 Light yellow, film-coated capsule-shaped tablet debossed “J-C” on one side and “T/P” on the
12 other.

13 Each tablet contains 37.5 mg tramadol hydrochloride and 325 mg paracetamol.

14 For excipients, see *List of Excipients*.

15 **CLINICAL INFORMATION**

16 **Indications**

17 ULTRACET is indicated for the management of moderate to severe pain. Dosage and
18 Administration

19 **Dosage – adults and children 16 years of age and over**

20 The maximum single dose of ULTRACET is 1 to 2 tablets every 4 to 6 hours as needed for pain
21 relief up to a maximum of 8 tablets per day.

22 **Treatment withdrawal**

23 Withdrawal symptoms may be relieved by tapering the medication (see *Warnings and Precautions*
24 – *Treatment Withdrawal*).

25 **Special populations**

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26 **Children below 16 years of age**

27 The safety and effectiveness of ULTRACET has not been established in the pediatric population.

28 **Elderly (65 years of age and older)**

29 No overall differences with regard to safety or pharmacokinetics were noted between subjects ≥ 65
30 years of age and younger subjects.

31 **Renal impairment**

32 In patients with creatinine clearances of less than 30 mL/min, it is recommended that the dosing
33 interval of ULTRACET be increased not to exceed 2 tablets every 12 hours.

34 **Hepatic impairment**

35 The use of ULTRACET in patients with severe hepatic impairment is not recommended.

36 **Administration**

37 ULTRACET tablets are for oral administration.

38 ULTRACET can be administered without regard to food.

39 **Contraindications**

40 ULTRACET is contraindicated:

- 41 • in patients who have previously demonstrated hypersensitivity to tramadol, paracetamol,
42 any other component of this product or opioids.
- 43 • in cases of acute intoxication with alcohol, hypnotics, narcotics, centrally acting
44 analgesics, opioids or psychotropic drugs.
- 45 • in patients using monoamine oxidase inhibitors (MAOIs) concurrently or within the last 14
46 days

47 **Warnings and Precautions**

48 **Seizures**

49 Seizures have been reported in patients receiving tramadol within the recommended dosage range.
50 Spontaneous post-marketing reports indicate that seizure risk is increased with doses of tramadol
51 above the recommended range. Concomitant use of tramadol increases the seizure risk in patients
52 taking: selective serotonin reuptake inhibitors (SSRI antidepressants or anorectics), tricyclic
53 antidepressants (TCAs), and other tricyclic compounds (e.g., cyclobenzaprine, promethazine,
54 etc.), or opioids.

55 Administration of tramadol may enhance the seizure risk in patients taking: monoamine oxidase
56 (MAO) inhibitors, neuroleptics or other drugs that reduce the seizure threshold.

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57 Risk of convulsions may also increase in patients with epilepsy, those with a history of seizures,
58 or in patients with a recognized risk for seizure (such as head trauma, metabolic disorders, alcohol
59 and drug withdrawal, central nervous system (CNS) infections). In tramadol overdose, naloxone
60 administration may increase the risk of seizure.

61 **Anaphylactoid reactions**

62 Patients with a history of anaphylactoid reactions to codeine and other opioids may be at increased
63 risk and therefore should not receive ULTRACET.

64 **Respiratory depression**

65 Patients with significant respiratory depression or acute, severe bronchial asthma are at increased
66 risk of life-threatening respiratory depression when treated with opioids. ULTRACET should only
67 be used in this patient population in a monitored setting and with the availability of resuscitative
68 equipment.

69 Administer ULTRACET cautiously in patients at risk for respiratory depression.

70 When large doses of tramadol are administered with anesthetic medications or alcohol, respiratory
71 depression may result. Treat such cases as an overdose. If naloxone is to be administered, use
72 cautiously because it may precipitate seizures.

73

74 **CYP2D6 ultra-rapid metabolism of tramadol**

75 Patients who are CYP2D6 ultra-rapid metabolizers may convert tramadol to its active metabolite
76 (M1) more rapidly and completely than other patients. This rapid conversion may result in higher
77 than expected serum M1 levels which could lead to an increased risk of respiratory depression.
78 (see *Overdose- Symptoms and signs, Tramadol*) Alternative medication, dose reduction and/or
79 increased monitoring for signs of tramadol overdose, such as respiratory depression is
80 recommended in patients known to be CYP2D6 ultra-rapid metabolizers. (see *Pharmacokinetic*
81 *Properties*).

82 **Use with Central Nervous System (CNS) depressants, including alcohol**

83 The concomitant use of tramadol (an active ingredient in ULTRACET) with CNS depressants,
84 including alcohol, may cause additive CNS depressant effects, including profound sedation and
85 respiratory depression. ULTRACET should be used with caution and in reduced dosages when
86 administered to patients receiving CNS depressants. (see *Interactions*)

87 **Increased intracranial pressure or head trauma**

88 ULTRACET should be used with caution in patients with increased intracranial pressure or head
89 injury.

90 **Drug dependence and potential for abuse**

91 ULTRACET contains tramadol as an active ingredient. A portion of the analgesic effect of
92 ULTRACET is attributable to the binding of the active ingredient, tramadol, to the mu-opioid

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93 receptor. Upon repeated administration of opioids, tolerance, physical dependence, and
94 psychological dependence may develop, even at recommended dosages. Assess each patient's risk
95 for opioid dependence and abuse prior to prescribing ULTRACET and monitor all patients
96 receiving ULTRACET for development of these behaviors. Risks are increased in patients with a
97 personal or family history of substance abuse (including drug or alcohol abuse or addiction) or
98 mental illness (e.g., major depression).

99 ULTRACET should not be used in opioid-dependent patients. Tramadol has been shown to
100 reinstate physical dependence in some patients that have been previously dependent on other
101 opioids.

102 **Increased risk of Hepatotoxicity with alcohol use**

103 Chronic heavy alcohol abusers may be at increased risk of liver toxicity from excessive
104 paracetamol use.

105 **Treatment withdrawal**

106 Withdrawal symptoms may occur if ULTRACET is discontinued abruptly. Panic attacks, severe
107 anxiety, hallucinations, paresthesia, tinnitus, and unusual CNS symptoms have also been very
108 rarely reported with abrupt discontinuation of tramadol hydrochloride. Clinical experience
109 suggests that withdrawal symptoms may be relieved by tapering the medication.

110 **Use with serotonin reuptake inhibitors**

111 Use ULTRACET with great caution in patients taking SSRIs. Concomitant use of tramadol with
112 SSRI's increases the risk of adverse events, including seizure and serotonin syndrome.

113 **Renal impairment**

114 ULTRACET has not been studied in patients with impaired renal function. In patients with
115 creatinine clearances of less than 30 mL/min, it is recommended that the dosing interval of
116 ULTRACET be increased not to exceed 2 tablets every 12 hours.

117 **Hepatic impairment**

118 The use of ULTRACET in patients with severe hepatic impairment is not recommended.

119 **Serious skin reactions**

120 Some of serious skin reactions such as acute generalized exanthematous pustulosis (AGEP),
121 Stevens - Johnson syndrome (SJS), and toxic epidermal necrolysis (TEN), have been reported in
122 patients receiving paracetamol. Patients should be informed about the signs of serious skin
123 reactions, and use of the drug should be discontinued at the first appearance of skin rash or any
124 other sign of hypersensitivity.

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125 **Hyponatremia**

126 Some hyponatremia has been reported with the use of ULTRACET, usually in patients with
127 predisposing risk factors, such as elderly patients and/or patients using concomitant medications
128 that may cause hyponatremia. In some reports, this hyponatremia appeared to be the result of the
129 syndrome of inappropriate antidiuretic hormone secretion (SIADH) and resolved with
130 discontinuation of ULTRACET and appropriate treatment (e.g. fluid restriction). During
131 ULTRACET treatment, monitoring for signs and symptoms of hyponatremia is recommended for
132 patients with predisposing risk factors.

133 **Precautions general**

134 The recommended dose of ULTRACET should not be exceeded.

135 ULTRACET should not be co-administered with other tramadol or paracetamol-containing
136 products.

137 **Interactions**

138 **Use with MAO inhibitors**

139 The concomitant use of ULTRACET with MAO inhibitors, or use within 14 days of their
140 discontinuation, is contraindicated due to the increased risk of seizures and serotonin syndrome.
141 (see *Contraindications*).

142 **Use with serotonin reuptake inhibitors**

143 Concomitant use of tramadol with SSRI's increases the risk of adverse events, including seizures
144 and serotonin syndrome. Use caution when administering ULTRACET in patients taking SSRIs
145 and monitor for signs of adverse events.

146 **Central Nervous System (CNS) depressants, including alcohol**

147 The concomitant use of tramadol with central nervous system depressants, such as
148 benzodiazepines and other sedatives/hypnotics, anesthetic agents, phenothiazines, tranquilizers,
149 opioids or alcohol, may produce additive CNS depressant effects, such as profound sedation and
150 respiratory depression. If concomitant use of ULTRACET with a CNS depressant is clinically
151 necessary, prescribe the lowest effective dosages and minimum duration for both drugs, and follow
152 patients closely for signs of respiratory depression.

153 **Use with carbamazepine**

154 Concomitant administration of tramadol hydrochloride and carbamazepine causes a significant
155 increase in tramadol metabolism. Patients taking carbamazepine may have a significantly reduced
156 analgesic effect from the tramadol component of ULTRACET.

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157 **Use with quinidine**

158 Tramadol is metabolized to M1 by CYP2D6. Concomitant administration of quinidine and
159 tramadol results in increased concentrations of tramadol. The clinical consequences of these
160 findings are unknown.

161 **Use with warfarin-like compounds**

162 As medically appropriate, periodic evaluation of prothrombin time should be performed when
163 ULTRACET and these agents are administered concurrently due to reports of increased
164 International Normalized Ratio (INR) in some patients.

165 **Use with inhibitors of CYP2D6**

166 In vitro drug interaction studies in human liver microsomes indicate that concomitant
167 administration with inhibitors of CYP2D6 such as fluoxetine, paroxetine, and amitriptyline could
168 result in some inhibition of the metabolism of tramadol.

169 **Use with cimetidine**

170 Concomitant administration of ULTRACET and cimetidine has not been studied. Concomitant
171 administration of tramadol and cimetidine does not result in clinically significant changes in
172 tramadol pharmacokinetics.

173 **Pregnancy, Breast-feeding and Fertility**

174 **Pregnancy**

175 Tramadol has been shown to cross the placenta.

176 There are no adequate and well-controlled studies in pregnant women.

177 Safe use in pregnancy has not been established.

178 Prolonged use of ULTRACET, or other opioids, during pregnancy may lead to neonatal opioid
179 withdrawal syndrome. This risk is particularly increased during the last trimester of pregnancy.

180 **Breast-feeding**

181 ULTRACET is not recommended for breast-feeding mothers because its safety in infants and
182 newborns has not been studied.

183 **Fertility**

184 The effect of tramadol or tramadol/paracetamol combination on human fertility has not been
185 evaluated.

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186 **Effects on Ability to Drive and Use Machines**

187 ULTRACET may impair mental or physical abilities required for the performance of potentially
188 hazardous tasks such as driving a car or operating machinery.

189 **Adverse Reactions**

190 The most frequently reported events were in the central nervous system and gastrointestinal
191 system.

192 The most common reported events were nausea, dizziness, and somnolence.

193 In addition, the following effects have been frequently observed, though the frequency is generally
194 lower:

195 **Body as a Whole** – Asthenia, fatigue, hot flushes

196 **Central and Peripheral Nervous System** – Headache, tremor

197 **Gastrointestinal System** – Abdominal pain, constipation, diarrhea, dyspepsia, flatulence, dry
198 mouth, vomiting

199 **Psychiatric Disorders** – Anorexia, anxiety, confusion, euphoria, insomnia, nervousness

200 **Skin and Appendages** – Pruritus, rash, increased sweating

201 Uncommon reported clinically significant adverse experiences with at least a possible causal link
202 to ULTRACET include:

203 **Body as a Whole** – Chest pain, rigors, syncope, withdrawal syndrome

204 **Cardiovascular Disorders** – Hypertension, aggravated hypertension, hypotension

205 **Central and Peripheral Nervous System** – Ataxia, convulsions, hypertonia, migraine,
206 aggravated migraine, involuntary muscle contractions, paraesthesia, stupor, vertigo

207 **Gastrointestinal System** –Dysphagia, melena, tongue edema

208 **Hearing and Vestibular Disorders** – Tinnitus

209 **Heart Rate and Rhythm Disorders** – Arrhythmia, palpitation, tachycardia

210 **Liver and Biliary System** – Liver test abnormalities

211 **Metabolic and Nutritional Disorders** – Weight decrease

212 **Psychiatric Disorders** – Amnesia, depersonalization, depression, drug abuse, emotional lability,
213 hallucination, impotence, bad dreams, abnormal thinking

214 **Red Blood Cell Disorders** – Anemia

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215 **Respiratory System** – Dyspnea

216 **Urinary System** – Albuminuria, micturition disorder, oliguria, urinary retention

217 **Vision Disorders** – Abnormal vision

218 ***Other clinically significant adverse experiences previously reported in clinical***
219 ***trials or post-marketing reports with tramadol hydrochloride***

220 Other events which have been reported with the use of tramadol products include: orthostatic
221 hypotension, allergic reactions (including anaphylaxis and urticaria, Stevens-Johnson
222 Syndrome/TENS), cognitive dysfunction, suicidal tendency, and hepatitis. Reported laboratory
223 abnormalities included elevated creatinine. Serotonin syndrome (whose symptoms may include
224 fever, excitation, shivering and agitation) has been reported with tramadol when used
225 concomitantly with other serotonergic agents such as SSRIs and MAO inhibitors. Post-marketing
226 experience with the use of tramadol containing products included rare reports of delirium, miosis,
227 mydriasis, and speech disorder, and very rare reports of movement disorder. Post-marketing
228 surveillance of tramadol has revealed rare alterations of warfarin effect, including elevation of
229 prothrombin times. Cases of hypoglycemia have been reported very rarely in patients taking
230 tramadol. Most reports were in patients with predisposing risk factors, including diabetes or renal
231 insufficiency, or in elderly patients.

232 Cases of hyponatremia and/or SIADH have been reported some in patients taking tramadol,
233 usually in patients with predisposing risk factors, such as the elderly or those using concomitant
234 medications that may cause hyponatremia.

235 ***Other clinically significant adverse experiences previously reported in clinical***
236 ***trials or post-marketing reports with paracetamol***

237 Allergic reactions (primarily skin rash) or reports of hypersensitivity secondary to paracetamol are
238 rare and generally controlled by discontinuation of the drug, and when necessary, symptomatic
239 treatment. There have been several reports that suggest that paracetamol may produce
240 hypoprothrombinemia when administered with warfarin-like compounds. In other studies,
241 prothrombin time did not change.

242 **Overdose**

243 **Symptoms and signs**

244 ULTRACET is a combination product. The clinical presentation of overdose may include the signs
245 and symptoms of tramadol toxicity, paracetamol toxicity or both. The initial symptoms of tramadol
246 overdosage may include respiratory depression and/or seizures. The initial symptoms seen within
247 the first 24 hours following an paracetamol overdose may include: gastrointestinal irritability,
248 anorexia, nausea, vomiting, malaise, pallor and diaphoresis.

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249 ***Tramadol***

250 Serious potential consequences of overdosage of the tramadol component are respiratory
251 depression, lethargy, coma, seizure, cardiac arrest and death. In addition, cases of QT
252 prolongation have been reported during overdose.

253 ***Paracetamol***

254 Paracetamol in massive overdosage may cause hepatic toxicity in some patients. Early symptoms
255 following a potentially hepatotoxic overdosage may include: gastrointestinal irritability, anorexia,
256 nausea, vomiting, malaise, pallor, and diaphoresis. Clinical and laboratory evidence of hepatic
257 toxicity may not be apparent until 48 to 72 hours post-ingestion.

258 **Treatment**

259 A single or multiple overdose with ULTRACET may be a potentially lethal polydrug overdose,
260 and appropriate expert consultation, if available, is recommended.

261 While naloxone will reverse some, but not all, symptoms caused by overdosage with tramadol, the
262 risk of seizures is also increased with naloxone administration. Based on experience with tramadol,
263 hemodialysis is not expected to be helpful in an overdose because it removes less than 7% of the
264 administered dose in a 4-hour dialysis period.

265 In treating an overdosage of ULTRACET, primary attention should be given to maintaining
266 adequate ventilation along with general supportive treatment. Because strategies for the
267 management of overdose are continually evolving, it is advisable to contact a poison control center
268 (where available) to determine the latest recommendations for the management of an overdose.
269 Hypotension is usually hypovolemic in etiology and should respond to fluids. Vasopressors and
270 other supportive measures should be employed as indicated. A cuffed endo-tracheal tube should
271 be inserted when necessary, to provide assisted respiration.

272 In adult and pediatric patients, any individual presenting with an unknown amount of paracetamol
273 ingested or with a questionable or unreliable history about the time of ingestion should have a
274 plasma paracetamol level drawn and be treated with acetylcysteine. If an assay cannot be obtained
275 and the estimated paracetamol ingestion exceeds 7.5 to 10 grams for adults and adolescents or
276 150 mg/kg for children, dosing with N-acetylcysteine should be initiated and continued for a full
277 course of therapy.

278 **PHARMACOLOGICAL PROPERTIES**

279 **Chemical names**

280 ***Tramadol hydrochloride***

281 (±)cis-2-[(dimethylamino)methyl]-1-(3-methoxyphenyl) cyclohexanol hydrochloride.

282 ***Paracetamol***

283 N-acetyl-p-aminophenol (4-hydroxyacetanilide).

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284 Pharmacodynamic Properties

285 Pharmacotherapeutic group: Analgesics, Opioids in combination with non-opioid analgesics, ATC
286 code: N02AJ13

287 Pharmacodynamic effects

288 Tramadol is a centrally acting analgesic compound. At least two complementary mechanisms
289 appear applicable, binding of parent and M1 metabolite to μ -opioid receptors and weak inhibition
290 of reuptake of norepinephrine and serotonin.

291 Paracetamol is another centrally acting analgesic. The exact site and mechanism of its analgesic
292 action is not clearly defined.

293 When evaluated in a standard animal model, the combination of tramadol and paracetamol
294 exhibited a synergistic effect.

295 Pharmacokinetic Properties

296 General

297 Tramadol is administered as a racemate and both the [-] and [+] forms of both tramadol and M1
298 are detected in the circulation. The pharmacokinetics of plasma tramadol and paracetamol
299 following oral administration of one ULTRACET tablet are shown in Table 1. Tramadol has a
300 slower absorption and longer half-life when compared to paracetamol.

301 After a single oral dose of one Tramadol/Paracetamol combination tablet (37.5 mg/325 mg) peak
302 plasma concentrations of 64.3/55.5 ng/mL [(+)-Tramadol/(-)-Tramadol] and 4.2 μ g/mL
303 (paracetamol) are reached after 1.8 h [(+)-Tramadol/(-)-Tramadol] and 0.9 h (paracetamol),
304 respectively. Mean elimination half lives $t_{1/2}$ are 5.1/4.7 h [(+)-Tramadol/(-)-Tramadol] and 2.5 h
305 (paracetamol).

306 Single and multiple dose pharmacokinetic studies of ULTRACET in volunteers showed no
307 significant drug interactions between tramadol and paracetamol.

Table 1: Summary of Mean (\pm SD) Pharmacokinetic Parameters of the (+)- and (-) Enantiomers of Tramadol and M1 and Paracetamol Following A Single Oral Dose Of One Tramadol/Paracetamol Combination Tablet (37.5 mg/325 mg) in Volunteers

Parameter ^a	(+)-Tramadol		(-)-Tramadol		(+)-M1		(-)-M1		Paracetamol	
C_{max} (ng/mL)	64.3	(9.3)	55.5	(8.1)	10.9	(5.7)	12.8	(4.2)	4.2	(0.8)
t_{max} (h)	1.8	(0.6)	1.8	(0.7)	2.1	(0.7)	2.2	(0.7)	0.9	(0.7)
CL/F (mL/min)	588	(226)	736	(244)	-	-	-	-	365	(84)
$t_{1/2}$ (h)	5.1	(1.4)	4.7	(1.2)	7.8	(3.0)	6.2	(1.6)	2.5	(0.6)

^a For paracetamol, C_{max} was measured as mcg/mL.

308

309 Absorption

310 Tramadol hydrochloride has a mean absolute bioavailability of approximately 75% following
311 administration of a single 100 mg oral dose of tramadol tablets. The mean peak plasma

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312 concentration of racemic tramadol and M1 after administration of two ULTRACET tablets occurs
313 at approximately two and three hours, respectively, post-dose in healthy adults.

314 Oral absorption of paracetamol following administration of ULTRACET is rapid and almost
315 complete and occurs primarily in the small intestine. Peak plasma concentrations of paracetamol
316 occur within 1 hour and are not affected by co-administration with tramadol.

317 **Food effects**

318 The oral administration of ULTRACET with food has no significant effect on the peak plasma
319 concentration or extent of absorption of either tramadol or paracetamol, so that ULTRACET can
320 be taken independently of meal times.

321 **Distribution**

322 The volume of distribution of tramadol was 2.6 and 2.9 L/kg in male and female subjects,
323 respectively, following a 100 mg intravenous dose. The binding of tramadol to human plasma
324 proteins is approximately 20%.

325 Paracetamol appears to be widely distributed throughout most body tissues except fat. Its apparent
326 volume of distribution is about 0.9 L/kg.

327 A relative small portion (~20%) of paracetamol is bound to plasma protein.

328 **Metabolism**

329 Plasma concentration profiles for tramadol and its M1 metabolite measured following dosing of
330 ULTRACET in volunteers showed no significant change compared to dosing with tramadol alone.

331 Approximately 30% of the dose is excreted in the urine as unchanged drug, whereas 60% of the
332 dose is excreted as metabolites. The major metabolic pathways appear to be *N*- and
333 *O*-demethylation and glucuronidation or sulfation in the liver. Tramadol is extensively
334 metabolized by a number of pathways, including CYP2D6. Patients who are CYP2D6 ultra-rapid
335 metabolizers may convert tramadol to its active metabolite (M1) more rapidly and completely than
336 other patients (see *Warnings and Precautions: CYP2D6 Ultra-Rapid Metabolism of Tramadol*).
337 The prevalence of this CYP2D6 genotype varies by population and has been reported in literature
338 to range from 1% to 10% in African Americans, Caucasian Americans, Asians and Europeans
339 (including specific studies in Greeks, Hungarians and Northern Europeans) to as high as 29% in
340 African/Ethiopians.

341 Paracetamol is primarily metabolized in the liver by first-order kinetics and involves three
342 principal separate pathways:

- 343 a) conjugation with glucuronide;
- 344 b) conjugation with sulfate; and
- 345 c) oxidation via cytochrome P450 enzyme pathway.

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346 **Excretion**

347 Tramadol and its metabolites are eliminated primarily by the kidney. The plasma elimination half-
348 lives of racemic tramadol and M1 are approximately six and seven hours, respectively. The plasma
349 elimination half-life of racemic tramadol increased from approximately six hours to seven hours
350 upon multiple dosing of ULTRACET.

351 The half-life of paracetamol is about 2 to 3 hours in adults. It is somewhat shorter in children and
352 somewhat longer in neonates and in cirrhotic patients. Paracetamol is eliminated from the body
353 primarily by formation of glucuronide and sulfate conjugates in a dose-dependent manner. Less
354 than 9% of paracetamol is excreted unchanged in the urine.

355

356 **NON-CLINICAL INFORMATION**

357 **Tramadol/Paracetamol Combination**

358 There are no animal or laboratory studies on the combination product (tramadol and paracetamol)
359 to evaluate carcinogenesis, mutagenesis, or impairment of fertility. No drug-related teratogenic
360 effects were observed in the progeny of rats treated orally with the combination of tramadol and
361 paracetamol. The tramadol/paracetamol combination product was shown to be embryotoxic and
362 fetotoxic in rats at a maternally toxic dose (50/434 mg/kg tramadol/paracetamol) 8.3 times the
363 maximum human dose but was not teratogenic at this dose level. Embryo and fetal toxicity
364 consisted of decreased fetal weights and increased supernumerary ribs. Lower and less severe
365 maternally toxic dosages (10/87 and 25/217 mg/kg tramadol/paracetamol) did not produce embryo
366 or fetal toxicity.

367 **Tramadol Hydrochloride**

368 **Carcinogenicity and mutagenicity**

369 A slight but statistically significant increase in two common murine tumors, pulmonary and
370 hepatic, was observed in a mouse carcinogenicity study, particularly in aged mice (dosing orally
371 up to 30 mg/kg for approximately two years, although the study was not done with the Maximum
372 Tolerated Dose). This finding is not believed to suggest risk in humans. No such finding occurred
373 in a rat carcinogenicity study.

374 Tramadol was not mutagenic in the following assays: Ames *Salmonella* microsomal activation
375 test, CHO/HPRT mammalian cell assay, mouse lymphoma assay (in the absence of metabolic
376 activation), dominant lethal mutation tests in mice, chromosome aberration test in Chinese
377 hamsters, and bone marrow micronucleus tests in mice and Chinese hamsters.

378 Weakly mutagenic results occurred in the presence of metabolic activation in the mouse lymphoma
379 assay and micronucleus test in rats. Overall, the weight of evidence from these tests indicates that
380 tramadol does not pose a genotoxic risk to humans.

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381 **Fertility**

382 No effects on fertility were observed for tramadol at oral dose levels up to 50 mg/kg in male rats
383 and 75 mg/kg in female rats.

384 **Effect on reproduction**

385 Tramadol was evaluated in peri- and post-natal studies in rats. Progeny of dams receiving oral
386 (gavage) dose levels of 50 mg/kg or greater had decreased weights, and pup survival was decreased
387 early in lactation at 80 mg/kg (6 to 10 times the maximum human dose). No toxicity was observed
388 for progeny of dams receiving 8, 10, 20, 25 or 40 mg/kg. Maternal toxicity was observed at all
389 dose levels of tramadol in this study, but effects on progeny were evident only at higher dose levels
390 where maternal toxicity was more severe.

391 **PHARMACEUTICAL INFORMATION**

392 **List of Excipients**

393 Carnauba wax

394 Hypromellose

395 Iron oxide

396 Magnesium stearate

397 Maize starch

398 Polyethylene glycol

399 Polysorbate 80

400 Powdered cellulose

401 Pregelatinized starch

402 Sodium starch glycolate

403 Titanium dioxide

404 **Incompatibilities**

405 None known.

406 **Shelf Life**

407 See expiry date on the outer pack.

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408 **Storage Conditions**

409 Store at 25°C (77°F); excursions permitted to 15-30°C (59-86°F).

410 Store in the original package.

411 Keep out of the sight and reach of children.

412 **Nature and Contents of Container**

413 The film-coated capsule-shaped tablets are packaged in aluminum foil that hold 10 tablets.

414 Available pack sizes: 10 tablets and 30 tablets.

415

416 **Instructions for Use and Handling**

417 Not applicable.

Manufactured by	Market authorization number	Date of authorization
Janssen-Korea Ltd., Gyeonggi-do, Korea	2C 26/51 (N)	3 September 2008
Janssen-Cilag SpA., Latina, Italy	2C 7/61 (N)	5 July 2018

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420 25 January 2017

421 **Imported by**

422 Janssen-Cilag Ltd.

423 106 Moo 4 Lad Krabang Industrial Estate,

424 Chalongkrung Rd., Lamplatew, Lad Krabang,

425 Bangkok 10520

426 Tel: +662-792-7200

427 Fax: +662-792-7222

428 **Warnings according to Ministry of Public Health announcement**

429

430 1. Do not take paracetamol more than it is recommended on the label. To do so may increase the
431 chance of liver damage. Do not take this medicine for more than 5 consecutive days.

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- 432 2. Avoid taking combination medicines containing paracetamol, it may cause you to get more
433 than a safe amount of paracetamol.
- 434 3. Check with your doctor or pharmacist if you drink alcohol on a regular basis, have liver or
435 kidney disease.
- 436 4. Contact your doctor and stop taking this medicine immediately if any following symptoms
437 occur such as swollen face, swollen eyelid, swollen lips, hives or swelling, fainting, rash, skin
438 rupture.