



1 11 November 2021
2 EMA/CHMP/371445/2021
3 Committee for Medicinal Products for Human Use (CHMP)

4 **Ibrutinib hard capsules 140 mg and film-coated tablets**
5 **140, 280, 420 & 560 mg product-specific bioequivalence**
6 **guidance**
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Draft Agreed by Pharmacokinetics Working Party (PKWP)	28 October 2020
Adopted by CHMP for release for consultation	11 November 2021
Start of public consultation	16 December 2021
End of consultation (deadline for comments)	31 March 2022
Agreed by Pharmacokinetics Working Party	
Adopted by CHMP	
Date for coming into effect	

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10 Comments should be provided using this [template](#). The completed comments form should be sent to
11 PKWPsecretariat@ema.europa.eu

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Keywords	<i>Bioequivalence, generics, ibrutinib</i>
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13 Ibrutinib hard capsules 140 mg and film-coated tablets 140, 280, 420 & 560 mg
 14 product-specific bioequivalence guidance
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16 Disclaimer:

17 *This guidance should not be understood as being legally enforceable and is without prejudice to the need to ensure that the data submitted in support of a*
 18 *marketing authorisation application complies with the appropriate scientific, regulatory and legal requirements.*

19 Requirements for bioequivalence demonstration (PKWP)*

BCS Classification	BCS Class: <input type="checkbox"/> I <input type="checkbox"/> III <input checked="" type="checkbox"/> Neither of the two Background: Ibrutinib may be considered a low solubility compound with complete absorption.
Bioequivalence study design <i>in case a BCS biowaiver is not feasible or applied</i>	single dose cross-over
	healthy volunteers
	<input checked="" type="checkbox"/> fasting <input type="checkbox"/> fed <input type="checkbox"/> both <input type="checkbox"/> either fasting or fed
	Strength: 140 mg for the capsules and 560 mg for the tablets Background: Highest strength to be used for a drug with linear pharmacokinetics and low solubility.
	Number of studies: One single dose study for each dosage form.
Analyte	<input checked="" type="checkbox"/> parent <input type="checkbox"/> metabolite <input type="checkbox"/> both

	<input checked="" type="checkbox"/> plasma/serum <input type="checkbox"/> blood <input type="checkbox"/> urine
	Enantioselective analytical method: <input type="checkbox"/> yes <input checked="" type="checkbox"/> no
Bioequivalence assessment	Main pharmacokinetic variables: AUC _{0-t} and C _{max}
	90% confidence interval: 80.00–125.00%

20 * Since high intra-subject variability ($CV_{intra} > 30\%$) is expected, the applicants might follow respective guideline recommendations.