GMP-Z Annex 13 – Geneesmiddelen voor onderzoek (Investigational Medicinal Products)

Inleiding

De annex 'Geneesmiddelen voor onderzoek (Investigational Medicinal Products)' uit de GMP-richtsnoeren is in de ziekenhuisapotheek ook van toepassing. Bij de bereiding van geneesmiddelen voor onderzoek is de GMP onverkort van toepassing en dient de ziekenhuisapotheek over een GMP certificaat (Certificate of GMP compliance of a manufacturer) te beschikken. De GMP-Z annex is gebaseerd op de GMP annex 13 versie 3 februari 2010.

GMP item	Richtsnoer GMP-Z	Toelichting
Principle	GMP	
Investigational medicinal products should be		In de ziekenhuisapotheek van toepassing bij de
produced in accordance with the principles and the		bereiding van geneesmiddelen voor onderzoek.
detailed guidelines of Good Manufacturing Practice		VTGM valt niet onder de reikwijdte van de annex.
for Medicinal Products (The Rules Governing		
Medicinal Products in The European Community,		
Volume IV). Other guidelines published by the		
European Commission should be taken into		
account where relevant and as appropriate to the		
stage of development of the product. Procedures		
need to be flexible to provide for changes as		
knowledge of the process increases, and		
appropriate to the stage of development of the		
product.		
In clinical trials there may be added risk to		
participating subjects compared to patients treated		
with marketed products. The application of GMP to		
the manufacture of investigational medicinal		
products is intended to ensure that trial subjects		
are not placed at risk, and that the results of		
clinical trials are unaffected by inadequate safety,		
quality or efficacy arising from unsatisfactory		
manufacture. Equally, it is intended to ensure that		
there is consistency between batches of the same		
investigational medicinal product used in the same		
or different clinical trials, and that changes during		
the development of an investigational medicinal		
product are adequately documented and justified.		
The production of investigational medicinal		
products involves added complexity in comparison		
to marketed products by virtue of the lack of fixed		
routines, variety of clinical trial designs,		
consequent packaging designs, and the need,		

often, for randomisation and blinding and	
increased risk of product cross-contamination and	
mix up. Furthermore, there may be incomplete	
knowledge of the potency and toxicity of the	
product and a lack of full process validation, or,	
marketed products may be used which have been	
re-packaged or modified in some way. These	
challenges require personnel with a thorough	
understanding of, and training in, the application of	
GMP to investigational medicinal products. Co-	
operation is required with trial sponsors who	
undertake the ultimate responsibility for all aspects	
of the clinical trial including the quality of	
investigational medicinal products. The increased	
complexity in manufacturing operations requires a	
highly effective quality system.	
The Annex also includes guidance on ordering,	
shipping, and returning clinical supplies, which are	
at the interface with, and complementary to,	
guidelines on Good Clinical Practice.	
Notes	
Non-investigational medicinal product1	
Products other than the test product, placebo or	
comparator may be supplied to subjects	
participating in a trial. Such products may be used	
as support or escape medication for preventative,	
diagnostic or therapeutic reasons and/or needed to	
ensure that adequate medical care is provided for	
the subject. They may also be used in accordance	
with the protocol to induce a physiological	
response. These products do not fall within the	
definition of investigational medicinal products and	
may be supplied by the sponsor, or the	
investigator.	
The sponsor should ensure that they are in	
accordance with the notification/request for	
authorisation to conduct the trial and that they are	
of appropriate quality for the purposes of the trial	
taking into account the source of the materials,	
whether or not they are the subject of a marketing	
authorisation and whether they have been	
repackaged. The advice and involvement of a	

Qualified Person is recommended in this task. <i>Manufacturing authorisation and reconstitution</i> Both the total and partial manufacture of investigational medicinal products, as well as the various processes of dividing up, packaging or presentation, is subject to the authorisation referred to in Article 13(1) Directive 2001/20/EC, cf. Article 9(1) Directive 2005/28/EC. This authorisation, however, shall not be required for reconstitution under the conditions set out in Article 9(2) Directive 2005/28/EC. For the purpose of this provision, reconstitution shall be understood as a simple process of: - dissolving or dispersing the investigational medicinal product for administration of the product to a trial subject, - or, diluting or mixing the investigational medicinal product(s) with some other substance(s) used as a vehicle for the purposes of administering it, Reconstitution is not mixing several ingredients, including the active substance, together to produce the investigational medicinal product. An investigational medicinal product. The process of reconstitution has to be undertaken as soon as practicable before administration. This process has to be defined in the clinical trial		
application / IMP dossier and clinical trial protocol,		
or related document, available at the site.	CMD	
1 The Quality System designed set up and	Givir	Product specificaties en bereidingsinstructies
verified by the manufacturer or importer, should be described in written procedures available to the sponsor, taking into account the GMP principles and guidelines applicable to investigational medicinal products.		kunnen onderhevig zijn aan veranderingen tijdens de duur van het onderzoek.
2. The product specifications and manufacturing instructions may be changed during development but full control and traceability of the changes should be maintained.	GMP	

3-4. Personnel	GMP	
3. All personnel involved with investigational		
medicinal products should be appropriately trained		
in the requirements specific to these types of		
product. Even in cases where the number of staff		
involved is small, there should be, for each batch,		
separate people responsible for production and		
guality control.		
4. The Qualified Person should ensure that there		
are systems in place that meet the requirements of		
GMP and should have a broad knowledge of		
pharmaceutical development and clinical trial		
processes. Guidance for the Qualified Person in		
connection with the certification of investigational		
medicinal products is given in paragraphs 38 to 41.		
5. Premises and equipment	GMP	
5. The toxicity, potency and sensitising potential		Er wordt bij voorkeur campagnegewijs gewerkt bij
may not be fully understood for investigational		de bereiding van geneesmiddelen voor onderzoek
medicinal products and this reinforces the need to		······································
minimise all risks of cross-contamination. The		
design of equipment and premises, inspection /		
test methods and acceptance limits to be used		
after cleaning should reflect the nature of these		
risks.		
Consideration should be given to campaign		
working where appropriate. Account should be		
taken of the solubility of the product in decisions		
about the choice of cleaning solvent.		
6-14. Documentation	GMP	
Specifications and instructions		Zo volledig als redelijkerwijs mogelijk is
6. Specifications (for starting materials, primary		
packaging materials, intermediate, bulk products		
and finished products), manufacturing formulae		
and processing and packaging instructions should		
be as comprehensive as possible given the current		
state of knowledge. They should be periodically re-		
assessed during development and updated as		
necessary. Each new version should take into		
account the latest data, current technology used,		
regulatory and pharmacopoeial requirements, and		
should allow traceability to the previous document.		
Any changes should be carried out according to a		

GMPZ herziening 2018 Annex 13 Geneesmiddelen voor onderzoek (Investigational Medicinal Products)*

written procedure, which should address any	
implications for product quality such as stability	
and bio equivalence.	
7. Rationales for changes should be recorded and	
the consequences of a change on product quality	
and on any on-going clinical trials should be	
investigated and documented.	
Order	
8. The order should request the processing and/or	
packaging of a certain number of units and/or their	
shipping and be given by or on behalf of the	
sponsor to the manufacturer. It should be in writing	
(though it may be transmitted by electronic	
means), and precise enough to avoid any	
ambiguity. It should be formally authorised and	
refer to the Product Specification File and the	
relevant clinical trial protocol as appropriate.	
Product Specification File	
9. The Product Specification File (see glossary)	
should be continually updated as development of	
the product proceeds, ensuring appropriate	
traceability to the previous versions. It should	
include, or refer to, the following documents:	
- Specifications and analytical methods for	
starting materials, packaging materials;	
- Intermediate, bulk and finished product;	
- Manufacturing methods;	
- In-process testing and methods;	
- Approved label copy;	
- Relevant clinical trial protocols and	
randomisation codes, as appropriate;	
- Relevant technical agreements with contract	
givers, as appropriate;	
- Stability data;	
- Storage and shipment conditions.	
The above listing is not intended to be exclusive or	
exhaustive. The contents will vary depending on	
the product and stage of development. The	
information should form the basis for assessment	
of the suitability for certification and release of a	
particular batch by the Qualified Person and should	
therefore be accessible to him/her. Where different	

the second	
manufacturing steps are carried out at different	
locations under the responsibility of different	
Qualified Persons, it is acceptable to maintain	
separate files limited to information of relevance to	
the activities at the respective locations.	
Manufacturing Formulae and Processing	
Instructions	
10. For every manufacturing operation or supply	
there should be clear and adequate written	
instructions and written records. Where an	
operation is not repetitive it may not be necessary	
to produce Master Formulae and Processing	
Instructions. Records are particularly important for	
the preparation of the final version of the	
documents to be used in routine manufacture once	
the marketing authorisation is granted.	
11. The information in the Product Specification	
File should be used to produce the detailed written	
instructions on processing, packaging, quality	
control testing, storage conditions and shipping.	
Packaging Instructions	
12. Investigational medicinal products are normally	
packed in an individual way for each subject	
included in the clinical trial. The number of units to	
be packaged should be specified prior to the start	
of the packaging operations, including units	
necessary for carrying out quality control and any	
retention samples to be kept. Sufficient	
reconciliations should take place to ensure the	
correct quantity of each product required has been	
accounted for at each stage of processing.	
Processing, testing and packaging batch	
records	
13. Batch records should be kept in sufficient detail	
for the sequence of operations to be accurately	
determined. These records should contain any	
relevant remarks which justify the procedures used	
and any changes made, enhance knowledge of the	
product and develop the manufacturing operations.	
14. Batch manufacturing records should be	
retained at least for the periods specified in	
Directive 2003/94/EC.	

15-33. Production	GMP	
Packaging materials		
15. Specifications and quality control checks		
should include measures to guard against		
unintentional unblinding due to changes in		
appearance between different batches of		
packaging materials.		
Manufacturing operations		
16. During development critical parameters should		
be identified and in-process controls primarily used		
to control the process. Provisional production		
parameters and in-process controls may be		
deduced from prior experience, including that		
gained from earlier development work. Careful		
consideration by key personnel is called for in		
order to formulate the necessary instructions and		
to adapt them continually to the experience gained		
in production. Parameters identified and controlled		
should be justifiable based on knowledge available		
at the time.		
17. Production processes for investigational		
medicinal products are not expected to be		
validated to the extent necessary for routine		
production but premises and equipment are		
expected to be qualified. For sterile products, the		
validation of sterilising processes should be of the		
same standard as for products authorised for		
marketing. Likewise, when required, virus		
inactivation/removal and that of other impurities of		
biological origin should be demonstrated, to assure		
the safety of biotechnologically derived products,		
by following the scientific principles and techniques		
defined in the available guidance in this area.		
18. Validation of aseptic processes presents		
special problems when the batch size is small; in		
these cases the number of units filled may be the		
maximum number filled in production. If		
practicable, and otherwise consistent with		
simulating the process, a larger number of units		
should be filled with media to provide greater		
confidence in the results obtained. Filling and		
sealing is often a manual or semi-automated		

GMPZ herziening 2018 Annex 13 Geneesmiddelen voor onderzoek (Investigational Medicinal Products)*

operation presenting great challenges to sterility so	
enhanced attention should be given to operator	
training, and validating the aseptic technique of	
individual operators.	
Principles applicable to comparator product	
19. If a product is modified, data should be	
available (e.g. stability, comparative dissolution,	
bioavailability) to demonstrate that these changes	
do not significantly alter the original quality	
characteristics of the product.	
20. The expiry date stated for the comparator	
product in its original packaging might not be	
applicable to the product where it has been	
repackaged in a different container that may not	
offer equivalent protection, or be compatible with	
the product. A suitable use-by date, taking into	
account the nature of the product, the	
characteristics of the container and the storage	
conditions to which the article may be subjected,	
should be determined by or on behalf of the	
sponsor. Such a date should be justified and must	
not be later than the expiry date of the original	
package. There should be compatibility of expiry	
dating and clinical trial duration.	
Blinding operations	
21. Where products are blinded, systems should	
be in place to ensure that the blind is achieved and	
maintained while allowing for identification of	
"blinded" products when necessary, including the	
batch numbers of the products before the blinding	
operation. Rapid identification of product should	
also be possible in an emergency.	
Randomisation code	
22. Procedures should describe the generation,	
security, distribution, handling and retention of any	
randomisation code used for packaging	
investigational products, and code-break	
mechanisms. Appropriate records should be	
maintained.	
Packaging	
23. During packaging of investigational medicinal	
products, it may be necessary to handle different	

products on the same packaging line at the same	
time. The risk of product mix up must be minimised	
by using appropriate procedures and/or,	
specialised equipment as appropriate and relevant	
staff training.	
24. Packaging and labelling of investigational	
medicinal products are likely to be more complex	
and more liable to errors (which are also harder to	
detect) than for marketed products, particularly	
when "blinded" products with similar appearance	
are used.	
Precautions against mis-labelling such as label	
reconciliation, line clearance, in process control	
checks by appropriately trained staff should	
accordingly be intensified.	
25. The packaging must ensure that the	
investigational medicinal product remains in good	
condition during transport and storage at	
intermediate destinations. Any opening or	
tampering of the outer packaging during transport	
should be readily discernible.	
Labelling	
Labelling 26. Table 1 summarises the contents of Articles	
Labelling26. Table 1 summarises the contents of Articles26-30 that follow. Labelling should comply with the	
Labelling26. Table 1 summarises the contents of Articles26-30 that follow. Labelling should comply with therequirements of Directive 2003/94/EC. The	
Labelling 26. Table 1 summarises the contents of Articles 26-30 that follow. Labelling should comply with the requirements of Directive 2003/94/EC. The following information should be included on labels,	
Labelling 26. Table 1 summarises the contents of Articles 26-30 that follow. Labelling should comply with the requirements of Directive 2003/94/EC. The following information should be included on labels, unless its absence can be justified, e.g. use of a	
Labelling 26. Table 1 summarises the contents of Articles 26-30 that follow. Labelling should comply with the requirements of Directive 2003/94/EC. The following information should be included on labels, unless its absence can be justified, e.g. use of a centralised electronic randomisation system:	
Labelling 26. Table 1 summarises the contents of Articles 26-30 that follow. Labelling should comply with the requirements of Directive 2003/94/EC. The following information should be included on labels, unless its absence can be justified, e.g. use of a centralised electronic randomisation system: (a) name, address and telephone number of the	
Labelling 26. Table 1 summarises the contents of Articles 26-30 that follow. Labelling should comply with the requirements of Directive 2003/94/EC. The following information should be included on labels, unless its absence can be justified, e.g. use of a centralised electronic randomisation system: (a) name, address and telephone number of the sponsor, contract research organisation or	
Labelling 26. Table 1 summarises the contents of Articles 26-30 that follow. Labelling should comply with the requirements of Directive 2003/94/EC. The following information should be included on labels, unless its absence can be justified, e.g. use of a centralised electronic randomisation system: (a) name, address and telephone number of the sponsor, contract research organisation or investigator (the main contact for information on	
Labelling 26. Table 1 summarises the contents of Articles 26-30 that follow. Labelling should comply with the requirements of Directive 2003/94/EC. The following information should be included on labels, unless its absence can be justified, e.g. use of a centralised electronic randomisation system: (a) name, address and telephone number of the sponsor, contract research organisation or investigator (the main contact for information on the product, clinical trial and emergency	
Labelling 26. Table 1 summarises the contents of Articles 26-30 that follow. Labelling should comply with the requirements of Directive 2003/94/EC. The following information should be included on labels, unless its absence can be justified, e.g. use of a centralised electronic randomisation system: (a) name, address and telephone number of the sponsor, contract research organisation or investigator (the main contact for information on the product, clinical trial and emergency unblinding);	
Labelling 26. Table 1 summarises the contents of Articles 26-30 that follow. Labelling should comply with the requirements of Directive 2003/94/EC. The following information should be included on labels, unless its absence can be justified, e.g. use of a centralised electronic randomisation system: (a) name, address and telephone number of the sponsor, contract research organisation or investigator (the main contact for information on the product, clinical trial and emergency unblinding); (b) pharmaceutical dosage form, route of	
Labelling26. Table 1 summarises the contents of Articles26-30 that follow. Labelling should comply with therequirements of Directive 2003/94/EC. Thefollowing information should be included on labels,unless its absence can be justified, e.g. use of acentralised electronic randomisation system:(a) name, address and telephone number of thesponsor, contract research organisation orinvestigator (the main contact for information onthe product, clinical trial and emergencyunblinding);(b) pharmaceutical dosage form, route ofadministration, quantity of dosage units, and in the	
Labelling 26. Table 1 summarises the contents of Articles 26-30 that follow. Labelling should comply with the requirements of Directive 2003/94/EC. The following information should be included on labels, unless its absence can be justified, e.g. use of a centralised electronic randomisation system: (a) name, address and telephone number of the sponsor, contract research organisation or investigator (the main contact for information on the product, clinical trial and emergency unblinding); (b) pharmaceutical dosage form, route of administration, quantity of dosage units, and in the case of open trials, the name/identifier and	
Labelling 26. Table 1 summarises the contents of Articles 26-30 that follow. Labelling should comply with the requirements of Directive 2003/94/EC. The following information should be included on labels, unless its absence can be justified, e.g. use of a centralised electronic randomisation system: (a) name, address and telephone number of the sponsor, contract research organisation or investigator (the main contact for information on the product, clinical trial and emergency unblinding); (b) pharmaceutical dosage form, route of administration, quantity of dosage units, and in the case of open trials, the name/identifier and strength/potency;	
Labelling 26. Table 1 summarises the contents of Articles 26-30 that follow. Labelling should comply with the requirements of Directive 2003/94/EC. The following information should be included on labels, unless its absence can be justified, e.g. use of a centralised electronic randomisation system: (a) name, address and telephone number of the sponsor, contract research organisation or investigator (the main contact for information on the product, clinical trial and emergency unblinding); (b) pharmaceutical dosage form, route of administration, quantity of dosage units, and in the case of open trials, the name/identifier and strength/potency; (c) the batch and/or code number to identify the	
Labelling 26. Table 1 summarises the contents of Articles 26-30 that follow. Labelling should comply with the requirements of Directive 2003/94/EC. The following information should be included on labels, unless its absence can be justified, e.g. use of a centralised electronic randomisation system: (a) name, address and telephone number of the sponsor, contract research organisation or investigator (the main contact for information on the product, clinical trial and emergency unblinding); (b) pharmaceutical dosage form, route of administration, quantity of dosage units, and in the case of open trials, the name/identifier and strength/potency; (c) the batch and/or code number to identify the contents and packaging operation;	
Labelling 26. Table 1 summarises the contents of Articles 26-30 that follow. Labelling should comply with the requirements of Directive 2003/94/EC. The following information should be included on labels, unless its absence can be justified, e.g. use of a centralised electronic randomisation system: (a) name, address and telephone number of the sponsor, contract research organisation or investigator (the main contact for information on the product, clinical trial and emergency unblinding); (b) pharmaceutical dosage form, route of administration, quantity of dosage units, and in the case of open trials, the name/identifier and strength/potency; (c) the batch and/or code number to identify the contents and packaging operation; (d) a trial reference code allowing identification of	
Labelling 26. Table 1 summarises the contents of Articles 26-30 that follow. Labelling should comply with the requirements of Directive 2003/94/EC. The following information should be included on labels, unless its absence can be justified, e.g. use of a centralised electronic randomisation system: (a) name, address and telephone number of the sponsor, contract research organisation or investigator (the main contact for information on the product, clinical trial and emergency unblinding); (b) pharmaceutical dosage form, route of administration, quantity of dosage units, and in the case of open trials, the name/identifier and strength/potency; (c) the batch and/or code number to identify the contents and packaging operation; (d) a trial reference code allowing identification of the trial, site, investigator and sponsor if not given	

(e) the trial subject identification number/treatment	
number and where relevant the visit number.	
(f) the name of the investigator (if not included in	
(a) or (d)).	
(a) directions for use (reference may be made to a	
(g) directions for use (reference may be made to a	
the trial subject or person administering the	
product); (b) "For clinical trial use only" or cimilar warding:	
(ii) For clinical that use only or similar wording;	
(i) the storage conditions;	
(J) period of use (use-by date, expiry date or re-test	
date as applicable), in month/year format and in a	
manner that avoids any ambiguity.	
(k) "keep out of reach of children" except when the	
product is for use in trials where the product is not	
taken home by subjects.	
27. The address and telephone number of the	
main contact for information on the product, clinical	
trial and for emergency unblinding need not appear	
on the label where the subject has been given a	
leaflet or card which provides these details and has	
been instructed to keep this in their possession at	
all times.	
28. Particulars should appear in the official	
language(s) of the country in which the	
investigational medicinal product is to be used. The	
particulars listed in Article 26 should appear on the	
primary packaging and on the secondary	
packaging (except for the cases described in	
Articles 29 and 30). The requirements with respect	
to the contents of the label on the primary and	
outer packaging are summarised in Table 1. Other	
languages may be included.	
29. When the product is to be provided to the trial	
subject or the person administering the medication	
within a primary package together with secondary	
packaging that is intended to remain together, and	
the secondary packaging carries the particulars	
listed in Paragraph 26, the following information	
shall be included on the label of the primary	
package (or any sealed dosing device that	
contains the primary packaging):	

(a) name of sponsor, contract research	
organisation or investigator;	
(b) pharmaceutical dosage form, route of	
administration (may be excluded for oral solid dose	
forms), quantity of dosage units and in the case of	
open label trials, the name/identifier and	
strength/potency;	
(c) batch and/or code number to identify the	
contents and packaging operation;	
(d) a trial reference code allowing identification of	
the trial, site, investigator and sponsor if not given	
elsewhere;	
(e) the trial subject identification number/treatment	
number and where relevant, the visit number.	
30. If the primary packaging takes the form of	
blister packs or small units such as ampoules on	
which the particulars required in Paragraph 26	
cannot be displayed, secondary packaging should	
be provided bearing a label with those particulars.	
The primary packaging should nevertheless	
contain the following:	
(a) name of sponsor, contract research	
organisation or investigator;	
(b) route of administration (may be excluded for	
oral solid dose forms) and in the case of open label	
trials, the name/identifier and strength/potency;	
(c) batch and/or code number to identify the	
contents and packaging operation;	
(d) a trial reference code allowing identification of	
the trial, site, investigator and sponsor if not given	
elsewhere;	
(e) the trial subject identification number/treatment	
number and where relevant, the visit number;	
31. Symbols or pictograms may be included to	
clarify certain information mentioned above.	
Additional information, warnings and/or handling	
instructions may be displayed.	
32. For clinical trials with the characteristics	
identified in Article 14 of Directive 2001/20/EC, the	
following particulars should be added to the	
original container but should not obscure the	
original labelling:	

i) name of sponsor, contract research organisation		
or investigator;		
ii) trial reference code allowing identification of the		
trial site, investigator and trial subject.		
33. If it becomes necessary to change the use-by		
date, an additional label should be affixed to the		
investigational medicinal product. This additional		
label should state the new useby date and repeat		
the batch number. It may be superimposed on the		
old use-by date, but for quality control reasons, not		
on the original batch number. This operation		
should be performed at an appropriately authorised		
manufacturing site. However, when justified, it may		
be performed at the investigational site by or under		
the supervision of the clinical trial site pharmacist,		
or other health care professional in accordance		
with national regulations. Where this is not		
possible, it may be performed by the clinical trial		
monitor(s) who should be appropriately trained.		
The operation should be performed in accordance		
with GMP principles, specific and standard		
operating procedures and under contract, if		
applicable, and should be checked by a second		
person. This additional labelling should be properly		
documented in both the trial documentation and in		
the batch records.		
34-37. Quality control	GMP	
		Er wordt onderkend dat een volledige validatie van
		het proces en het product niet mogelijk is. Product
		specificaties zijn leidend bij de kwaliteitscontrole
34. As processes may not be standardised or fully		
validated, testing takes on more importance in		
ensuring that each batch meets its specification.		
35. Quality control should be performed in		
accordance with the Product Specification File and		
in accordance with the information notified		
pursuant to Article 9(2) of Directive 2001/20/EC.		
Verification of the effectiveness of blinding should		
be performed and recorded.		
36. Samples are retained to fulfill two purposes;		
firstly to provide a sample for analytical testing and		
secondly to provide a specimen of the finished		

product. Samples may therefore fall into two	
categories:	
Reference sample: a sample of a batch of starting	
material, packaging material, product contained in	
its primary packaging or finished product which is	
stored for the purpose of being analysed should	
the need arise. Where stability permits, reference	
samples from critical intermediate stages (e.g.	
those requiring analytical testing and release) or	
intermediates, which are transported outside of the	
manufacturer's control, should be kept.	
Retention sample: a sample of a packaged unit	
from a batch of finished product for each	
packaging run/trial period. It is stored for	
identification purposes. For example, presentation,	
packaging, labeling, leaflet, batch number, expiry	
date should the need arise.	
In many instances the reference and retention	
samples will be presented identically, i.e. as fully	
packaged units. In such circumstances, reference	
and retention samples may be regarded as	
interchangeable.Reference and retention samples	
of investigational medicinal product, including	
blinded product should be kept for at least two	
years after completion or formal discontinuation of	
the last clinical trial in which the batch was used,	
whichever period is the longer.	
Consideration should be given to keeping retention	
samples until the clinical report has been prepared	
to enable confirmation of product identity in the	
event of, and as part of an investigation into	
inconsistent trial results.	
37. The storage location of Reference and	
Retention samples should be defined in a	
Technical Agreement between the sponsor and	
manufacturer(s) and should allow timely access by	
the competent authorities.	
Reference samples of finished product should be	
stored within the EEA or in a third country where	
appropriate arrangements have been made by the	
Community with the exporting country to ensure	
that the manufacturer of the investigational	

medicinal product applies standards of good		
manufacturing practice at least equivalent to those		
laid down by the Community. In exceptional		
circumstances the reference samples of the		
finished product may be stored by the		
manufacturer in another third country, in which		
case this should be justified, and documented in a		
technical agreement between the sponsor,		
importer in the EEA and that third country		
manufacturer.		
The reference sample should be of sufficient size		
to permit the carrying out, on, at least, two		
occasions, of the full analytical controls on the		
batch in accordance with the IMP dossier		
submitted for authorisation to conduct the clinical		
trial.		
In the case of <i>retention samples</i> , it is acceptable to		
store information related to the final packaging as		
written or electronic records if such records provide		
sufficient information.		
In the case of the latter, the system should comply		
with the requirements of Annex 11.		
with the requirements of Annex 11. 38-55. Release of batches	GMP	
with the requirements of Annex 11. 38-55. Release of batches	GMP	Vrijgifte gebeurt door de Qualified Person
with the requirements of Annex 11. 38-55. Release of batches	GMP	Vrijgifte gebeurt door de Qualified Person (gekwalificeerd persoon, zie Annex 16)
with the requirements of Annex 11. 38-55. Release of batches	GMP	Vrijgifte gebeurt door de Qualified Person (gekwalificeerd persoon, zie Annex 16) (april 2018: in overeenstemming met annex 16 is
with the requirements of Annex 11. 38-55. Release of batches	GMP	Vrijgifte gebeurt door de Qualified Person (gekwalificeerd persoon, zie Annex 16) (april 2018: in overeenstemming met annex 16 is bevoegd persoon gewijzigd in gekwalificeerd
with the requirements of Annex 11. 38-55. Release of batches	GMP	Vrijgifte gebeurt door de Qualified Person (gekwalificeerd persoon, zie Annex 16) (april 2018: in overeenstemming met annex 16 is bevoegd persoon gewijzigd in gekwalificeerd persoon)
with the requirements of Annex 11. 38-55. Release of batches 38. Release of investigational medicinal products	GMP	Vrijgifte gebeurt door de Qualified Person (gekwalificeerd persoon, zie Annex 16) (april 2018: in overeenstemming met annex 16 is bevoegd persoon gewijzigd in gekwalificeerd persoon)
with the requirements of Annex 11. 38-55. Release of batches 38. Release of investigational medicinal products (see paragraph 43) should not occur until after the	GMP	Vrijgifte gebeurt door de Qualified Person (gekwalificeerd persoon, zie Annex 16) (april 2018: in overeenstemming met annex 16 is bevoegd persoon gewijzigd in gekwalificeerd persoon)
with the requirements of Annex 11. 38-55. Release of batches 38. Release of investigational medicinal products (see paragraph 43) should not occur until after the Qualified Person has certified that the	GMP	Vrijgifte gebeurt door de Qualified Person (gekwalificeerd persoon, zie Annex 16) (april 2018: in overeenstemming met annex 16 is bevoegd persoon gewijzigd in gekwalificeerd persoon)
with the requirements of Annex 11. 38-55. Release of batches 38. Release of investigational medicinal products (see paragraph 43) should not occur until after the Qualified Person has certified that the requirements of Article 13.3 of Directive	GMP	Vrijgifte gebeurt door de Qualified Person (gekwalificeerd persoon, zie Annex 16) (april 2018: in overeenstemming met annex 16 is bevoegd persoon gewijzigd in gekwalificeerd persoon)
with the requirements of Annex 11. 38-55. Release of batches 38. Release of investigational medicinal products (see paragraph 43) should not occur until after the Qualified Person has certified that the requirements of Article 13.3 of Directive 2001/20/EC have been met (see paragraph 39).	GMP	Vrijgifte gebeurt door de Qualified Person (gekwalificeerd persoon, zie Annex 16) (april 2018: in overeenstemming met annex 16 is bevoegd persoon gewijzigd in gekwalificeerd persoon)
with the requirements of Annex 11. 38-55. Release of batches 38. Release of investigational medicinal products (see paragraph 43) should not occur until after the Qualified Person has certified that the requirements of Article 13.3 of Directive 2001/20/EC have been met (see paragraph 39). The Qualified Person should take into account the the requirement of the take into account take into acco	GMP	Vrijgifte gebeurt door de Qualified Person (gekwalificeerd persoon, zie Annex 16) (april 2018: in overeenstemming met annex 16 is bevoegd persoon gewijzigd in gekwalificeerd persoon)
with the requirements of Annex 11. 38-55. Release of batches 38. Release of investigational medicinal products (see paragraph 43) should not occur until after the Qualified Person has certified that the requirements of Article 13.3 of Directive 2001/20/EC have been met (see paragraph 39). The Qualified Person should take into account the elements listed in paragraph 40 as appropriate.	GMP	Vrijgifte gebeurt door de Qualified Person (gekwalificeerd persoon, zie Annex 16) (april 2018: in overeenstemming met annex 16 is bevoegd persoon gewijzigd in gekwalificeerd persoon)
with the requirements of Annex 11. 38-55. Release of batches 38. Release of investigational medicinal products (see paragraph 43) should not occur until after the Qualified Person has certified that the requirements of Article 13.3 of Directive 2001/20/EC have been met (see paragraph 39). The Qualified Person should take into account the elements listed in paragraph 40 as appropriate. 39. The duties of the Qualified Person in relation to	GMP	Vrijgifte gebeurt door de Qualified Person (gekwalificeerd persoon, zie Annex 16) (april 2018: in overeenstemming met annex 16 is bevoegd persoon gewijzigd in gekwalificeerd persoon)
with the requirements of Annex 11. 38-55. Release of batches 38. Release of investigational medicinal products (see paragraph 43) should not occur until after the Qualified Person has certified that the requirements of Article 13.3 of Directive 2001/20/EC have been met (see paragraph 39). The Qualified Person should take into account the elements listed in paragraph 40 as appropriate. 39. The duties of the Qualified Person in relation to investigational medicinal products are affected by the effected by	GMP	Vrijgifte gebeurt door de Qualified Person (gekwalificeerd persoon, zie Annex 16) (april 2018: in overeenstemming met annex 16 is bevoegd persoon gewijzigd in gekwalificeerd persoon)
 with the requirements of Annex 11. 38-55. Release of batches 38. Release of investigational medicinal products (see paragraph 43) should not occur until after the Qualified Person has certified that the requirements of Article 13.3 of Directive 2001/20/EC have been met (see paragraph 39). The Qualified Person should take into account the elements listed in paragraph 40 as appropriate. 39. The duties of the Qualified Person in relation to investigational medicinal products are affected by the different circumstances that can arise and are 	GMP	Vrijgifte gebeurt door de Qualified Person (gekwalificeerd persoon, zie Annex 16) (april 2018: in overeenstemming met annex 16 is bevoegd persoon gewijzigd in gekwalificeerd persoon)
with the requirements of Annex 11. 38-55. Release of batches 38. Release of investigational medicinal products (see paragraph 43) should not occur until after the Qualified Person has certified that the requirements of Article 13.3 of Directive 2001/20/EC have been met (see paragraph 39). The Qualified Person should take into account the elements listed in paragraph 40 as appropriate. 39. The duties of the Qualified Person in relation to investigational medicinal products are affected by the different circumstances that can arise and are referred to below. Table 2 summarises the	GMP	Vrijgifte gebeurt door de Qualified Person (gekwalificeerd persoon, zie Annex 16) (april 2018: in overeenstemming met annex 16 is bevoegd persoon gewijzigd in gekwalificeerd persoon)
with the requirements of Annex 11. 38-55. Release of batches 38. Release of investigational medicinal products (see paragraph 43) should not occur until after the Qualified Person has certified that the requirements of Article 13.3 of Directive 2001/20/EC have been met (see paragraph 39). The Qualified Person should take into account the elements listed in paragraph 40 as appropriate. 39. The duties of the Qualified Person in relation to investigational medicinal products are affected by the different circumstances that can arise and are referred to below. Table 2 summarises the elements that need to be considered for the most	GMP	Vrijgifte gebeurt door de Qualified Person (gekwalificeerd persoon, zie Annex 16) (april 2018: in overeenstemming met annex 16 is bevoegd persoon gewijzigd in gekwalificeerd persoon)
with the requirements of Annex 11. 38-55. Release of batches 38. Release of investigational medicinal products (see paragraph 43) should not occur until after the Qualified Person has certified that the requirements of Article 13.3 of Directive 2001/20/EC have been met (see paragraph 39). The Qualified Person should take into account the elements listed in paragraph 40 as appropriate. 39. The duties of the Qualified Person in relation to investigational medicinal products are affected by the different circumstances that can arise and are referred to below. Table 2 summarises the elements that need to be considered for the most common circumstances:	GMP	Vrijgifte gebeurt door de Qualified Person (gekwalificeerd persoon, zie Annex 16) (april 2018: in overeenstemming met annex 16 is bevoegd persoon gewijzigd in gekwalificeerd persoon)

subject to an EU marketing authorisation; the	
duties are laid down in article 13.3(a) of Directive	
2001/20/FC	
(b) ii) Product sourced from the open market within	
FU in accordance with Article 80(b) of Directive	
2001/83/EC and subject to an EU marketing	
authorisation regardless of manufacturing origin.	
the duties are as described above however the	
scope of certification can be limited to assuring that	
the products are in accordance with the	
notification/request for authorisation to conduct the	
trial and any subsequent processing for the	
purpose of blinding, trial-specific packaging and	
labelling. The Product Specification File will be	
similarly restricted in scope (see 9).	
(c) Product imported directly from a 3rd country:	
the duties are laid down in article 13.3(b) of	
Directive 2001/20/EC. Where investigational	
medicinal products are imported from a 3rd country	
and they are subject to arrangements concluded	
between the Community and that country, such as	
a Mutual Recognition Agreement (MRA),	
equivalent standards of Good Manufacturing	
Practice apply provided any such agreement is	
relevant to the product in question. In the absence	
of an MRA, the Qualified Person should determine	
that equivalent standards of Good Manufacturing	
Practice apply through knowledge of the quality	
system employed at the manufacturer. This	
knowledge is normally acquired through audit of	
the manufacturer's quality systems. In either case,	
the Qualified Person may then certify on the basis	
of documentation supplied by the 3rd country	
manufacturer (see 40).	
(d) For imported comparator products where	
adequate assurance cannot be obtained in order to	
certify that each batch has been manufactured to	
equivalent standards of Good Manufacturing	
Practice, the duty of the Qualified Person is	
defined in article 13.3(c) of Directive 2001/20/EC.	
40. Assessment of each batch for certification prior	
to release may include as appropriate:	

- batch records including control reports in-	
process test reports and release reports	
demonstrating compliance with the product	
specification file, the order, protocol and	
randomisation code. These records should include	
all deviations or planned changes, and any	
consequent additional checks or tests, and should	
be completed and endorsed by the staff authorised	
to do so according to the guality system;	
- production conditions;	
- the validation status of facilities, processes and	
methods;	
- examination of finished packs;	
- where relevant, the results of any analyses or	
tests performed after importation;	
- stability reports;	
- the source and verification of conditions of	
storage and shipment;	
- audit reports concerning the quality system of	
the manufacturer;	
- Documents certifying that the manufacturer is	
authorised to manufacture	
investigational medicinal products or comparators	
for export by the appropriate authorities in the	
country of export;	
- where relevant, regulatory requirements for	
marketing authorisation, GMP standards applicable	
and any official verification of GMP compliance;	
- all other factors of which the QP is aware that	
are relevant to the quality of the batch.	
The relevance of the above elements is affected by	
the country of origin of the product, the	
manufacturer, and the marketed status of the	
product (with or without a marketing authorisation,	
In the EU or in a third country) and its phase of	
development. The sponsor should ensure that the	
elements taken into account by the qualified	
person when certifying the batch are consistent	
with the information notified pursuant to Article 9(2)	
01 Directive 2001/20/EC. See also section 44.	
41. where investigational medicinal products are	
manufactured and packaged at different sites	

under the supervision of different Qualified	
Persons, the recommendations listed in Annex 16	
to the GMP Guide should be followed as	
applicable.	
42 Where permitted in accordance with local	
regulations, packaging or labelling is carried out at	
the investigator site by or under the supervision of	
a clinical trials pharmacist or other health care	
professional as allowed in those regulations, the	
Qualified Person is not required to certify the	
activity in question. The sponsor is nevertheless	
responsible for ensuring that the activity is	
adequately documented and carried out in	
accordance with the principles of GMP and should	
seek the advice of the Qualified Person in this	
regard.	
SHIPPING	
43 Investigational medicinal products should	
remain under the control of the sponsor until after	
completion of a two-step procedure: certification by	
the Qualified Person: and release by the sponsor	
for use in a clinical trial following fulfillment of the	
requirements of Article 9 (Commencement of a	
clinical trial) of Directive 2001/20/EC. Both steps	
should be recorded3 and retained in the relevant	
trial files held by or on behalf of the sponsor. The	
Sponsor should ensure that the details set out in	
the clinical trial application and considered by the	
Qualified Person are consistent with what is finally	
accepted by the Competent Authorities. Suitable	
arrangements to meet this requirement should be	
established. In practical terms, this can best be	
achieved through a change control process for the	
Product Specification File and defined in a	
Technical Agreement between the QP and the	
Sponsor.	
44. Shipping of investigational products should be	
conducted according to instructions given by or on	
behalf of the sponsor in the shipping order.	
45. De-coding arrangements should be available to	
the appropriate responsible personnel before	
investigational medicinal products are shipped to	

the investigator site.	
46. A detailed inventory of the shipments made by	
the manufacturer or importer should be	
maintained. It should particularly mention the	
addressees' identification.	
47. Transfers of investigational medicinal products	
from one trial site to another should remain the	
exception. Such transfers should be covered by	
standard operating procedures. The product	
history while outside of the control of the	
manufacturer, through for example, trial monitoring	
reports and records of storage conditions at the	
original trial site should be reviewed as part of the	
assessment of the product's suitability for transfer	
and the advice of the Qualified person should be	
sought. The product should be returned to the	
manufacturer, or another authorised manufacturer,	
for re-labelling, if necessary, and certification by a	
Qualified Person. Records should be retained and	
full traceability ensured.	
COMPLAINTS	
48. The conclusions of any investigation carried	
out in relation to a complaint which could arise	
from the quality of the product should be discussed	
between the manufacturer or importer and the	
sponsor (if different). This should involve the	
Qualified Person and those responsible for the	
relevant clinical trial in order to assess any	
potential impact on the trial, product development	
and on subjects.	
RECALLS AND RETURNS	
Recalls	
49. Procedures for retrieving investigational	
medicinal products and documenting this retrieval	
should be agreed by the sponsor, in collaboration	
with the manufacturer or importer where different.	
The investigator and monitor need to understand	
their obligations under the retrieval procedure.	
50. The Sponsor should ensure that the supplier of	
any comparator or other medication to be used in a	
clinical trial has a system for communicating to the	
Sponsor the need to recall any product supplied.	

Returns	
51. Investigational medicinal products should be	
returned on agreed conditions defined by the	
sponsor, specified in approved written procedures.	
52. Returned investigational medicinal products	
should be clearly identified and stored in an	
appropriately controlled, dedicated area. Inventory	
records of the returned medicinal products should	
be kept.	
DESTRUCTION	
53. The Sponsor is responsible for the destruction	
of unused and/or returned investigational medicinal	
products. Investigational medicinal products should	
therefore not be destroyed without prior written	
authorisation by the Sponsor.	
54. The delivered, used and recovered quantities	
of product should be recorded, reconciled and	
verified by or on behalf of the sponsor for each trial	
site and each trial period. Destruction of unused	
investigational medicinal products should be	
carried out for a given trial site or a given trial	
period only after any discrepancies have been	
investigated and satisfactorily explained and the	
reconciliation has been accepted. Recording of	
destruction operations should be carried out in	
such a manner that all operations may be	
accounted for. The records should be kept by the	
Sponsor.	
55. When destruction of investigational medicinal	
products takes place a dated certificate of, or	
receipt for destruction, should be provided to the	
sponsor. These documents should clearly identify,	
or allow traceability to, the batches and/or patient	
numbers involved and the actual quantities	
destroyed.	