

Instructions to authors

Molecular Nutrition & Food Research

March 2014

Authors are requested to follow these instructions carefully.
Manuscripts not prepared accordingly will not be accepted.

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1 Aims and scope

Molecular Nutrition & Food Research (MNF) is a primary research journal devoted to health, safety and all aspects of molecular nutrition such as nutritional biochemistry, nutrigenomics and metabolomics aiming to link the information arising from the related disciplines Bioactivity & Safety, Immunology, Microbiology and Chemistry.

MNF is published in 12 issues *per* year, including regular issues as well as topical issues. Four categories of scientific contributions are accepted for publication:

- (i) research articles,
- (ii) reviews,
- (iii) educational papers, and
- (iv) food & function articles.

⇒ Introducing 'Food & Function' - a new section in MNF:

Manuscripts in which the individual components responsible for any biological activity have not been chemically characterized (e.g. animal studies with an uncharacterized extract of fruits) will not be accepted as full research articles. However, in these cases, authors may submit their manuscript in a shortened form for the new section "Food & Function". In this section, concise contributions describing the functional effects of food without a detailed characterization of the bioactive components will be considered for publication (for further details see Section 4 -Types of contributions).

Our Early View online publication is updated weekly and enables papers to be available online and citable before going into print.

2 General terms of publication

The author vouches that the work has not been published elsewhere, either completely, in part, or in any other form and that the manuscript has not been submitted to another journal. The submitting author (listed under "Correspondence") accepts the responsibility of having included as coauthors all appropriate persons. The submitting author certifies that all coauthors have seen a draft copy of the manuscript and agree with its publication.

Scientific contributions will be peer-reviewed on the criteria of originality and quality. Following an initial assessment by the Editors, those papers with a high priority rating are sent for external review to experts in the field. To aid in the peer review, we invite authors to suggest potential reviewers for their paper during the online submission procedure. Authors also have the option of naming non-preferred reviewers. Those manuscripts failing to reach the required priority rating or not fitting within the scope of the Journal are not considered further and are returned to authors without detailed comments. On acceptance, papers may be subjected to editorial changes. Responsibility for the factual accuracy of a paper rests entirely with the author.

Upon acceptance of the manuscript the author is required to fill in the "Copyright Transfer Agreement" and the "Color and Page Charge Agreement" forms (please see the journal's [For Authors](#) page for current charges), sign and submit them to:

Molecular Nutrition & Food Research
Editorial Office
Wiley-VCH Verlag
Boschstrasse 12
D-69469 Weinheim
Germany
E-mail: mnf@wiley.com
Fax: +49-6201-606-172

These mandatory forms can be found on the journals [For Author's](#) page. Please note that if you are submitting material

which has already been published elsewhere, you must also send to the Editorial Office permission in writing that this material may be reprinted in **MNF**. Authors are expected to carry any costs arising from permissions.

MNF publishes articles in English. Manuscripts must be grammatically and linguistically correct, and authors less familiar with English usage are advised to seek the help of English-speaking colleagues. American spelling is preferred.

Please note that the Ethical Guidelines for Publication of Chemical Research issued by the American Chemical Society are followed and applied by the Editors of **MNF**.

All instances of publishing misconduct, including, but not limited to, plagiarism, data fabrication, image/data manipulation to falsify/enhance results *etc.* will result in rejection/ retraction of the manuscript.

MNF endorses the COPE (Committee on Publication Ethics) guidelines and will pursue cases of suspected research and publication misconduct. In such cases, the journal will follow the processes set out by COPE. For more information about COPE please visit the COPE website at <http://publicationethics.org.uk>. The Journal also participates in the new CrossRef service CrossCheck (<http://www.crossref.org/crosscheck.html>), a plagiarism screening tool that allows the comparison of authored work against the content in the internet database of published work to highlight matching or similar text sections. Please be aware that manuscripts submitted to **MNF** will be subject to random testing using the CrossCheck software.

3 Online submission of manuscripts

MNF offers a web-based manuscript submission and peer review system. This service guarantees fast and safe submission of manuscripts and rapid assessment. Using this system is obligatory, conventional submission of manuscripts is not accepted.

3.1 General remarks

To submit your manuscript online, please proceed along the following steps:

- Prepare your manuscript and illustrations in the appropriate format, according to the instructions given below (see Sections 4 to 9). Please also make sure that your paper conforms with the scientific and style instructions of **MNF** as given herein. Links for English language assistance also provided here.
- If you have not already done so, create an account for yourself in the system at the submission site, <http://mc.manuscriptcentral.com/mnf/> by clicking on the "Create Account" button.
- Let the system guide you through the submission process. Online help is available to you at all times during the process. You are also able to exit/re-enter at any stage before finally "submitting" your work. All submissions are kept strictly confidential. To monitor the progress of your manuscript throughout the review process, just login periodically and check your Author Center.

If you have any questions concerning the online submission program, do not hesitate to contact Editorial Support at mnf@wiley.com.

3.2 Electronic manuscripts

Please follow the instructions in Section 5 "Organization of manuscripts" when preparing the electronic version of the manuscript and ensure that data are given in the order and the correct style for the journal.

- Main text (incl. front material) as well as figure legends and tables (in this order) should be given in one file, preferably saved in .doc or .rtf format - Word 2007 or older, doc(x).
- Data should be typed unjustified, without hyphenation except for compound words. Use carriage returns only to end headings and paragraphs; spacing will be introduced by the typesetter.
- Do not use the space bar to make indents; where these are required (e. g. tables) use the TAB key.
- If working in Word for Windows, please create special characters using **Insert/Symbol**.
- Figures should preferably be in TIFF, EPS, PPT or the original format. See section 5.9 for details.

All submissions will be converted to PDF format during the upload process. The system automatically generates one PDF file which contains all parts of the manuscript apart from supporting information.

3.3 Revised manuscripts

In revised manuscripts the areas containing the major required changes should be marked and the script color changed. The file(s) with the changes visible on screen should be submitted to the online procedure.

Upon acceptance of the manuscript the final uploaded version will be taken as the basis for copy editing and the subsequent production process.

4 Types of contributions

Three types of scientific contributions are considered for publication:

(i) **Research articles** describing complete investigations. Unsolicited research articles should not exceed 6500 words in total; this includes references, figure legends and tables. Papers of up to 7 printed pages will be published free of charge; for papers exceeding that length a **page charge** (see the journals [For Authors](#) page) will be levied. Please note that the length of an article depends greatly on the type of figures and tables provided. Manuscripts must not have been published previously, except in the form of a preliminary communication.

(ii) **Reviews** providing an overview on the current research in a specific field. Review articles should not exceed 8500 words in total including references, figure legends and tables. Review articles of up to 15 printed pages will be published free of charge; for papers exceeding that length a **page charge** (see the journals [For Authors](#) page) will be levied.

(iii) **Educational papers** describing and/or explaining a method or technique used in food and nutrition research. They should be written in continuous style with headings (not numbered). An educational paper may be supplemented by multimedia material (e. g. animations or video sequences) which will be only available online.

(iv) **Food & Function articles** describing studies of well-documented functional bioextracts/mixtures exhibiting pharmacological, medical and/or physiological effects, where the bioactive component has not been chemically characterized. However, the work reported has to be supported by animal and/or human studies. Research based solely on cell culture will not be considered.

They should be written in a concise and continuous style without subheadings with a maximum of 2500 words (including references as well as figure and table legends) and three display elements (figures and tables). For an example of this type of article format [click here](#). Longer articles will not be accepted for this category. Any additional material pertinent to the study should be provided as Supporting Information online only. This includes e.g any detailed Materials & Methods description. Authors submitting in this category should please make sure that they select 'Food & Function' as article type during submission.

Reviews and educational papers will normally be invited by the Editors. Authors wishing to submit a review or an educational paper should send a brief outline of its contents to the Editor-in-Chief (humpf@uni-muenster.de) before the manuscript is drafted.

5 Organization of manuscripts

Manuscripts must be typewritten with double spacing (including references, tables, legends, *etc.*).

5.1 Contents of first page of manuscript (all types of contributions)

The first page of the manuscript should contain only the following:

- 1) Title of the paper containing only the keywords pertaining to the subject matter. Standard abbreviations may be used in the title.
- 2) Full names (including first name) of the authors and the name of the institute. If the publication originates from several institutes the affiliations of all authors should be clearly stated by using superscript numbers after the name and before the institute.
- 3) Name (and title) and full postal address of the author to whom all correspondence (including galley proofs) is to be sent. E-mail and fax number must be included to speed up communication.
- 4) A list of abbreviations used in the paper excluding standard abbreviations (see list of "Standard Abbreviations", Section 9).
- 5) Keywords (max. 5, in alphabetical order).

5.2 Abstract (all types of contributions)

The second page of the manuscript should contain the abstract only. For research articles it should be structured as follows:

Scope
Methods and results
Conclusion (focus on nutritional relevance)

The abstract must be self-explanatory and intelligible without reference to the text. It should not exceed 200 words. Abbreviations, but not standard abbreviations, must be written in full when first used.

5.3 Division into sections (research articles only)

Manuscripts should be divided into the following sections:

- "1 Introduction": containing a description of the problem under investigation and a brief survey of the existing literature on the subject.
- "2 Materials and methods": for special materials and equipment, the manufacturer's name and location should be provided.
- "3 Results"
- "4 Discussion"

"5 References"

Sections 3 and 4 may be combined and should then be followed by a short section entitled "Concluding remarks". Subdivisions of sections should be indicated by subheadings.

5.4 References (all types of contributions)

References should be numbered sequentially in the order in which they are cited in the text. The numbers should be set in brackets, thus [2, 18]. References are to be collected in numerical order at the end of the manuscript under the heading "References"; they should also be typed with double spacing throughout. Papers with multiple authors should be limited to listing five authors. Where there are more than five authors, the first four should be listed, followed by *et al.* Please include the title of the manuscript in full, followed by a full stop. Journal names should be abbreviated according to the practice of PubMed. The abbreviated journal name and the volume number should be in italics. Please note the following examples.

Journals:

[1] Keppler, K., Hein, E.-M., Humpf, H.-U., Metabolism of quercetin and rutin by the pig caecal microflora prepared by freeze-preservation. *Mol. Nutr. Food Res.* 2006, 50, 686-695.

Other serial publications such as "*Advances in Food and Nutrition Research*" should be cited in the same manner as journals.

Books:

[2] Eisenbrand, G., Dayan, A. D., Elias, P. S., Grunow, W., Schlatter, J. (Eds.), *Carcinogenic and Anticarcinogenic Factors in Food*, Wiley-VCH Verlag, Weinheim 2003.

Chapter in a book:

[3] Geis, A., in: Heller, K. J. (Ed.), *Genetically Engineered Food - Methods and Detection*, Wiley-VCH Verlag, Weinheim 2003, pp. 100-118.

Allusions to "unpublished observations", papers "to be published" or "submitted for publication" and the like should be a part of the text, in parentheses. Material "in press" should be entered under references along with the DOI (Digital Object Identifier), if available. Posters and abstracts in meetings books must not be cited unless they are generally accessible. Responsibility for the accuracy of bibliographic references rests entirely with the author. Please note that website addresses must not be included as a reference, but should be inserted in parentheses in the text directly after the data to which they refer.

5.5 Acknowledgements

Acknowledgements as well as information regarding funding sources should be provided on a separate page and will appear at the end of the text (before the "References").

5.6 Conflict of interest statement

Authors are responsible for disclosing all and any financial and personal relationships between themselves and others that might bias their work. To prevent ambiguity, authors must state explicitly whether potential conflicts do or do not exist. Should such a conflict of interest exist, a statement to that effect must be included in a separate paragraph following on from the acknowledgements section detailing - for each author - the nature of the conflict. Even if there is none, this should also be stated. This is a mandatory requirement for all articles.

5.7 Tables

Tables with suitable captions at the top and numbered with Arabic numerals should be collected at the end of the text on separate sheets (one page *per* table). Column headings should be kept as brief as possible and indicate units (in parentheses). Footnotes to tables should be indicated with a), b), c) *etc.* and typed on the same page as the table.

5.8 Supporting information

Extensive tables should be published online as supporting information. This material will not be typeset so authors should prepare it in the final form in which it should appear (no further editing will be done). Also for this reason there will be no galley proofs of this material. Supporting information will be made freely available on the web (similar to the table of contents and the article abstracts). Authors are permitted to place this material on their homepages when they are setting up a link to the full-text version of the article in Wiley Online Library.

Further, other files may be submitted as supporting information (*e.g.*, animations, video sequences). All supporting information will also undergo the peer-review process. Thus, this material has to be submitted electronically along with the main body of the article. It is in the hands of the Editor-in-Chief to decide which part of the manuscript will be published as supporting information.

5.9 Figures and legends

Please prepare your figures according to the following guidelines:

- Each figure should be given in a separate file and should have the following resolution at their final published size:

Type	Resolution
Graphs	800 - 1200 DPI
Photos	400 - 800 DPI
Color (only RGB)	300 - 400 DPI

- Use the zoom function to check the resolution of the figures: if an image viewed at 400 percent on screen is blurry (pixellated) then the image will not reproduce well in print. An image viewed at 100 percent on screen may look fine but will not necessarily reproduce well as the screen resolution is much lower (72-96 dpi) than that of a printing press.
- Crop, or scale, figures to the size intended for publication; no enlargement or reduction should be necessary. Otherwise figures should be submitted in a format which can be reduced to a width of 50-80 mm or 120-170 mm, with symbols and labels to a height of 2.0 mm (after reduction) and a minimum line weight of 0.3 pt for black lines.
- Photographic images often produce large files. Most software has an option to use LZW compression and this will produce smaller files, especially when the image contains large areas of single color or repeating textures and patterns.
- In electropherograms presented horizontally, the anode should be on the left while in vertical presentations the anode should be at the bottom. Two-dimensional presentations, e.g. with isoelectric focusing and sodium dodecyl sulfate-electrophoresis in the two dimensions, are thus presented consistently with the standard coordinate system.
- Figures should be numbered consecutively with Arabic numerals in the order of their appearance.
- Each figure is to be accompanied by a legend which should be self-explanatory. The legends should not appear under the figures but be included after the references.

By supplying high-quality electronic artwork, delays in production can be reduced as follow-up requests for improvement are no longer necessary.

Color figures can be reproduced, however, authors will be charged for additional costs incurred for the reproduction of color (see Section 2).

5.10 Image manipulation

Manipulation of images is strongly discouraged and all figures must accurately reflect the original data. Information should not be enhanced, eliminated, added, obscured or moved. In cases where manipulation is unavoidable, this should be clearly detailed in the Figure legend. All instruments, software and processes used to obtain the images must be fully detailed in the manuscript either in the Figure legends or the Materials and Methods. Acceptable image manipulation includes uniformly adjusting the contrast of an entire image, and any control images, ensuring that all original data, including the background, remains visible and that no new features are introduced. Cropping of gels, or re-positioning of lanes/fields, is permitted providing that all alterations are clearly indicated by the use of dividing lines in the image itself, vital data are not removed and an explanation of the alterations is included in the Figure legend. Unacceptable manipulation includes, but is not limited to, the enhancement of one feature/band over others, removal of background noise/bands and so on. Authors must be able to produce all data in their raw format upon editorial request.

5.11 Biographic material

Corresponding authors of review articles are invited to submit a portrait photograph of themselves and a short biographical text (no more than 80 words) which will appear at the very end of the article.

5.12 Structural formulae

Structural formulae should be drawn in the manuscript in the position where they belong. They must be numbered in consecutive order with the other figures.

5.13 Equations

Mathematical and chemical equations are to be written in the manuscript at the place in which they belong and should be marked by Arabic numerals in parentheses in the right margin in the order of their appearance.

5.14 Abbreviations

Abbreviations are hindrances to a reader working in a field other than that of the author, and to abstractors. Therefore, their use should be restricted to a minimum. Abbreviations should be introduced only when repeatedly used. Abbreviations used only in a table or a figure may be defined in the legend. Standard abbreviations may be used in the title and keywords. If nonstandard abbreviations are used in the Abstract they should be defined in the Abstract, in the list of abbreviations of the manuscript, as well as when first used in the body of the paper.

Section 9 at the end of these instructions contains the list of standard abbreviations which may be used without definition in the articles published in **MNF**.

5.15 Ethics

If the manuscript describes experiments using animals, the permission of the national or local authorities (giving the permission or the accreditation number of the laboratory and of the investigator) should be stated. If no such rules or permission are stipulated in the particular country, this must also be mentioned in the paper. In the case of human studies, it should be stated that local ethical committee approval has been received and that the informed consent of all participating subjects was obtained.

6 Proofs and reprints

Before publication authors will receive page proofs *via* Email in PDF low resolution file format, together with a sheet including instructions and a reprint order form, also as PDF files. The page proofs and the reprint order form should be printed out. The proofs should be carefully corrected following the instructions. In particular, authors should answer any editing queries. The reprint order form should be filled out (even if reprints are not required), and both should be returned as stated in the proof email.

Authors will be charged for extensive alterations of their article. Reprints can be ordered at prices shown on the reprint order form. Upon publication (in print) the submitting author (listed under "Correspondence") will receive a complimentary low-resolution pdf of his/her article.

7 OnlineOpen Licenses, Funding requirements and Copyright

If your paper is accepted, the author identified as the formal corresponding author for the paper will receive an email prompting them to login into Author Services; where via the Wiley Author Licensing Service (WALS) they will be able to complete the license agreement on behalf of all authors on the paper.

(a) For authors signing the copyright transfer agreement

If the OnlineOpen option (b) is not selected the corresponding author will be presented with the copyright transfer agreement (CTA) to sign. The terms and conditions of the copyright transfer agreement can be previewed in the samples associated with the Copyright FAQs: http://authorservices.wiley.com/bauthor/faqs_copyright.asp

Note to Contributors on Deposit of Accepted Version

Funder arrangements

Certain funders, including the NIH, members of the Research Councils UK (RCUK) and Wellcome Trust require deposit of the Accepted Version in a repository after an embargo period. Details of funding arrangements are set out at the following website: <http://www.wiley.com/go/funderstatement>

Institutions

Wiley has arrangements with certain academic institutions to permit the deposit of the Accepted Version in the institutional repository after an embargo period. Details of such arrangements are set out at the following website: <http://www.wiley.com/go/funderstatement>

(b) For authors choosing OnlineOpen

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8 Reporting specific data

8.1 Chemical structures

Structures should be produced with the use of a drawing program such as ChemDraw.

Structure drawing preferences are as follows:

As drawing settings select:

- chain angle 120°
- bond spacing 18% of width

fixed length 14.4 points (0.508 cm, 0.2 in.)
bold width 2.0 points (0.071 cm, 0.0278 in.)
line width 0.6 point (0.021 cm, 0.0084 in.)
margin width 1.6 points (0.056 cm, 0.0222 in.)
hash spacing 2.5 points (0.088 cm, 0.0347 in.)
As text setting select: font, Arial or Helvetica; size, 10 pt.
Under the preferences choose: units, points; tolerances, 3 pixels.
Under page setup choose: paper, US Letter; scale, 100%.

Using the ChemDraw ruler or appropriate margin settings, create structure blocks, schemes, and equations having maximum widths of 11.3 cm (one-column format) or 23.6 cm (two-column format). Note: if the foregoing preferences are selected as cm values, the ChemDraw ruler is calibrated in cm. Also note that a standard sheet of paper is only 21.6 cm wide, so all graphics submitted in two-column format must be prepared and printed in landscape mode.

Use boldface type for compound numbers but not for atom labels or captions.

Authors using other drawing packages should, as far as possible, modify their program's parameters to reflect the above guidelines.

8.2 Physical and other data

It is important that novel compounds, either synthetic or isolated/produced from natural sources, be characterized completely and unambiguously. Supporting data normally include physical form, melting point (if solid), UV/IR spectra, if appropriate, ^1H and ^{13}C NMR, mass spectral data, and optical rotations or CD information (when compounds have chiral centers).

Reports on flavor constituents should conform to the recommendations made by the International Organization 5 of the Flavor Industry (IOFI). Thus, substances must be identified using the latest analytical techniques. In general, any particular substance must have its identity confirmed by at least two methods; that means, in practice, comparison of chromatographic and spectroscopic data (which may include GC, MS, IR, and NMR) with those of an authentic sample. If only one method has been applied, the identification has to be labeled as "tentative": This is also valid in case of identification performed only by comparison of literature data.

Equations should be numbered consecutively and referred to the text; e.g. defined as in Eq. (1).

Physical data should be quoted with decimal points (e. g. $25.8 \text{ Jk}^{-1} \text{ mol}^{-1}$), and arranged as follows where possible - but in any event in the same order within the manuscript (when measurement conditions remain unchanged they need only be mentioned once, for instance in the column headings): m.p./b.p. 20°C ; $[\alpha]_{\text{D}}^{20} = -13.5$ ($c = 0.2$ in acetone) ^1H NMR (200 MHz, $[\text{D}_6]\text{THF}$, 25°C , TMS): $\delta = 1.3$ (q, $^3\text{J}(\text{H,H}) = 8 \text{ Hz}$, 2 H; CH_2), 0.9 ppm (t, $^3\text{J}(\text{H,H}) = 8 \text{ Hz}$, 3 H; CH_3); IR(Nujol): $\tilde{\nu} = 1790 \text{ cm}^{-1}$ (C=O); UV/Vis (*n*-hexane): $\lambda_{\text{max}}(\epsilon) = 320$ (5000), 270 nm (12000); MS (70 eV): m/z (%): 108 (20) $[\text{M}^+]$, 107 (60) $[\text{M}^+ - \text{H}]$, 91 (100) $[\text{C}_7\text{H}_7^+]$. Plane angles in products of units can have either $^\circ$ or deg as the unit.

Nomenclature, symbols, and units: The rules and recommendations of the International Union of Pure and Applied Chemistry (IUPAC), the International Union of Biochemistry (IUB), and the International Union of Pure and Applied Physics (IUPAP) should be adhered to.

8.3 Nucleotide and protein sequences

New nucleotide data must be submitted and deposited in the DDBJ/EMBL/GenBank databases and an accession number obtained before the paper can be accepted for publication. Submission to any one of the three collaborating databanks is sufficient to ensure data entry in all. The accession number should be included in the manuscript, e. g. as a footnote on the title page: „Note: Nucleotide sequence data reported are available in the DDBJ/EMBL/GenBank databases under the accession number(s) -“. If requested the database will withhold release of data until publication. The most convenient method for submitting sequence data is by the World Wide Web:

EMBL *via* Webin:

<http://www.ebi.ac.uk/embl/Submission/webin.html>

GenBank *via* BankIt:

<http://www.ncbi.nlm.nih.gov/BankIt/>

DDBJ *via* Sakura:

<http://sakura.ddbj.nig.ac.jp/>

Alternatively, the stand-alone submission tool ‚Sequin‘ is available from the EBI at <http://www.ebi.ac.uk/Sequin> and from NCBI at <http://www.ncbi.nlm.nih.gov/Sequin/>.

For special types of submissions (e. g. genomes, bulk submissions *etc.*) additional submission systems are available from the above sites.

Database contact information:

EMBL: EMBL Nucleotide Sequence Submissions
European Bioinformatics Institute
Wellcome Trust Genome Campus, Hinxton,

Cambridge CB10 1SD, UK
Tel.: +44 1223 494400; fax: +44 1223 494472
E-mail: datasubs@ebi.ac.uk
<http://www.ebi.ac.uk>

GenBank: National Center for Biotechnology
Information
National Library of Medicine,
Bldg. 38A, Rm 8 N-803
Bethesda, MD 20894, USA
Tel.: +1 301 496 2475; fax: +1 301 480 9241
E-mail: info@ncbi.nlm.nih.gov
<http://www.ncbi.nlm.nih.gov>

DDBJ: Center for Information Biology and
DNA Data Bank of Japan
National Institute of Genetics, 111 Yata,
Mishima, Shizuoka 411-8540, Japan
Tel.: +81 559 81 6853; fax: +81 559 81 6849
E-mail: ddbj@ddbj.nig.ac.jp
<http://www.ddbj.nig.ac.jp>

Protein sequences which have been determined by direct sequencing must be submitted to Swiss-Prot at the EMBL Outstation - The European Bioinformatics Institute. Please note that we do not provide accession numbers, **in advance**, for protein sequences that are the result of translation of nucleic acid sequences. These translations will automatically be forwarded to us from the EMBL nucleotide database and are assigned Swiss-Prot accession numbers on incorporation into TrEMBL.

Results from characterization experiments should also be submitted to Swiss-Prot at the EBI. This can include such information as function, subcellular location, subunit *etc.*

Contact information:

Swiss- Swiss-Prot submissions,
Prot: European Bioinformatics Institute
Wellcome Trust Genome Campus, Hinxton
Cambridge, CB10 1SD, UK
Tel.: +44 1223 494400; fax: +44 1223 494472
E-mail: datasubs@ebi.ac.uk (for sequence submissions); update@ebi.ac.uk (for characterization information)
<http://www.ebi.ac.uk>

9 Standard abbreviations

The abbreviations as listed below may be used without definition in the articles published in **MNF**. Please refer to Section 5.14 for the correct usage of abbreviations in **MNF**.

A	absorbance
ACN	acetonitrile
A/D	analog to digital converter
amu	atomic mass unit
API	atmospheric pressure ionization
BMI	body mass index
bp	base pairs
BSA	bovine serum albumin
CBB	Coomassie Brilliant Blue

CE	capillary electrophoresis
CEC	capillary electrochromatography
CFE	continuous flow electrophoresis
CID	collision-induced dissociation
cpm	counts <i>per</i> minute
CV	coefficient of variation
CZE	capillary zone electrophoresis
1-D	one-dimensional
2-D	two-dimensional
Da	dalton (molecular mass)
DAD	diode-array detection (or diode array detector)
2-DE	two-dimensional gel electrophoresis
DMEM	Dulbecco's modified Eagle medium
DMF	<i>N,N</i> -dimethylformamide
DMSO	dimethyl sulfoxide
dsDNA	double-stranded DNA
DTT	dithiothreitol
EDTA	ethylenediaminetetraacetic acid
EGTA	ethylene glycol-bis (β -aminoethylether)- <i>N,N,N',N'</i> -tetraacetic acid
ELISA	enzyme-linked immunosorbent assay
EOF	electroosmotic flow
ER	endoplasmic reticulum
ESI	electrospray ionization
FAB	fast atomic bombardment
FAME	fatty acid methyl esters
FITC	fluorescein isothiocyanate
GC	gas chromatography
GMO	genetically modified organism
HDL	high density lipoprotein
HEPES	<i>N</i> -(2-hydroxyethyl)piperazine-2'-(2-ethane-sulfonic acid)
HPCE	high-performance capillary electrophoresis
HPLC	high-performance liquid chromatography
HSA	human serum albumin
HTML	hypertext mark-up language
id	inside diameter
IEF	isoelectric focusing
Ig	immunoglobulin
IL	interleukin
IFN	interferon
IT	ion trap
kbp	kilobase pairs
kDa	kilodalton (molecular mass)
LC	liquid chromatography
LDL	low density lipoprotein
LOD	limit of detection
LOQ	limit of quantitation
LPS	lipopolysaccharide
mAb	monoclonal antibody

MALDI-MS matrix-assisted laser desorption/ionization mass spectrometry

Mbp	megabase pairs
MHC	major histocompatibility complex
MOPS	3-(<i>N</i> -morpholino)propanesulfonic acid
<i>M_r</i>	relative molecular mass (dimensionless)
MS	mass spectrometry
MS/MS	tandem mass spectrometry
MUFA	monounsaturated fatty acid
<i>m/z</i>	mass-to-charge ratio
NMR	nuclear magnetic resonance
od	outside diameter
OD	optical density
ORF	open reading frame
PAGE	polyacrylamide gel electrophoresis
PBS	phosphate-buffered saline
PCR	polymerase chain reaction
PEG	polyethylene glycol
<i>pI</i>	isoelectric point
PMSF	phenylmethylsulfonyl fluoride
PMT	photomultiplier tube
ppm	parts <i>per</i> million
PTFE	polytetrafluoroethylene
PUFA	polyunsaturated fatty acid
PVP	polyvinylpyrrolidone
RIA	radioimmunoassay
RNA	ribonucleic acid
RP	reversed phase
rpm	rotations <i>per</i> minute
RSD	relative standard deviation
RT-PCR	reverse transcriptase-PCR
SCFA	short chain fatty acid
SD	standard deviation
SDS	sodium dodecyl sulfate
SEM	standard error of the mean
SIM	selected ion monitoring
S/N	signal-to-noise ratio
SPE	solid-phase extraction
ssDNA	single-stranded DNA
TFA	trifluoroacetic acid
THF	tetrahydrofuran
TIC	total ion current
TLC	thin-layer chromatography
TOF	time of flight
Tris	tris(hydroxymethyl)aminomethane
URL	uniform resource locator
Vh	volt x hours
VLDL	very low density lipoprotein