



3rd Plenary Meeting

Vienna
May 2004

TRANSFORMATION OF FOOD CONSUMPTION INTO NUTRIENT INTAKES

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Methodology

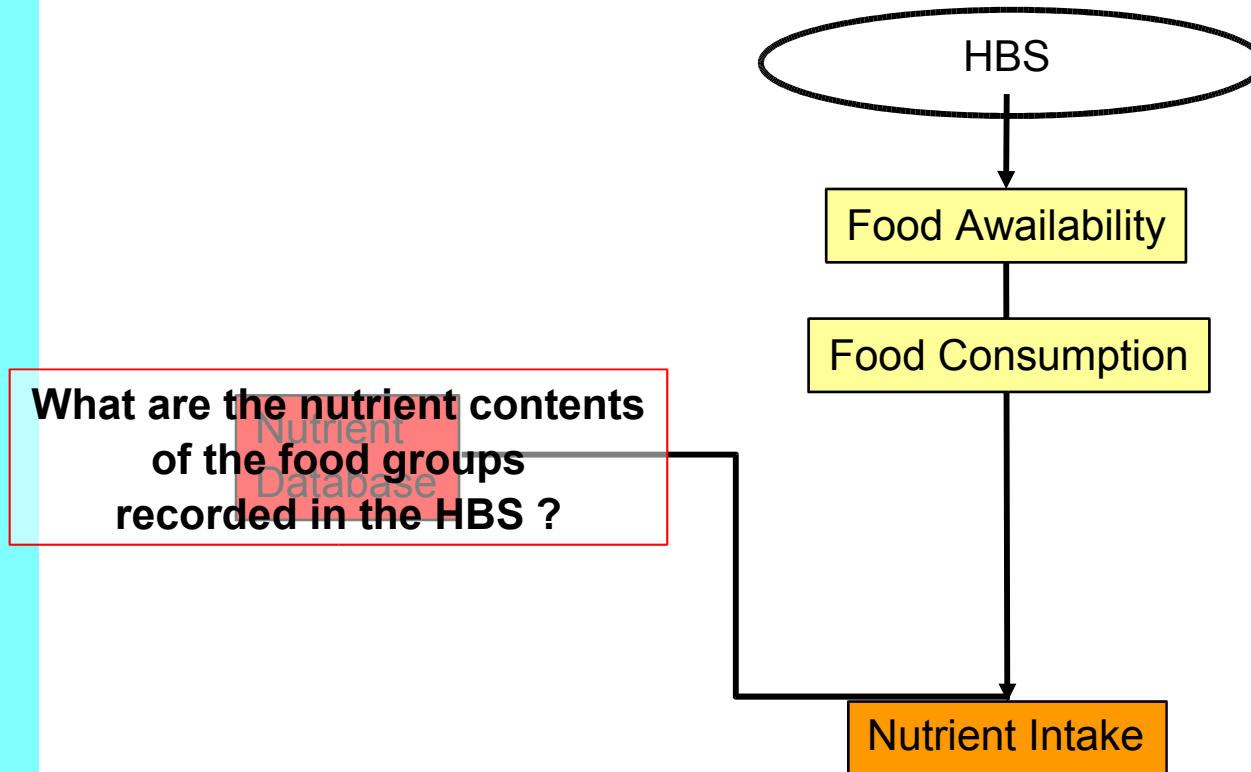
Results

Food Level: Comparison of Nutrient Contents

Person Level: Comparison of Nutrient Intakes

Conclusions

PROBLEM OF TRANSFORMING OF FOOD CONSUMPTION INTO NUTRIENT INTAKES



PROBLEM OF TRANSFORMING OF FOOD CONSUMPTION INTO NUTRIENT INTAKES

SBLS	STE	GCAL	GJ	ZW	ZE	ZF	ZK
T000021	Fishes cooked	96	402	76387	21312	1077	0
T000111	Fishes fresh	82	344	79529	18300	897	0
T100021	Herrings/Mackerels/Tunnys cooked	137	575	71934	20882	5947	0
T100111	Herrings/Mackerels/Tunnys	118	493	75600	18100	5000	0
T101021	Herring lean cooked	137	575	71934	20882	5947	0
T101111	Herring lean fresh sliced	118	493	75600	18100	5000	0
T101121	Herring lean fresh cooked sliced	137	575	71934	20882	5947	0
T101124	Herring lean fresh cooked whole	85	355	43597	13047	3604	0
T101181	Herring lean fresh fried sliced	137	575	71934	20882	5947	0
T101184	Herring lean fresh deep-fried whole	85	355	43597	13047	3604	0
T101211	Herring lean deep-frozen	118	493	75600	18100	5000	0
T101221	Herring lean deep-frozen cooked	137	575	71934	20882	5947	0
T101401	Herring lean salted	110	462	60994	16615	4844	0
T101611	Herring lean smoked	125	522	74214	19182	5299	0
T101701	Herring lean tinned in oil	265	1110	59343	14196	23490	0
T101702	Herring lean tinned in oil	163	681	70020	15913	11087	0
T101802	Herring lean preserve	139	581	70074	15923	8376	0
T101811	Herring lean preserve	221	926	61256	14652	18305	0

METHODOLOGY OF TRANSFORMING OF FOOD CONSUMPTION INTO NUTRIENT INTAKES

In general:

The nutrient content of a food group is determined by the foods, which belong to this group.

3 methods estimating the nutrient contents of food groups are regarded:

3. Determination by a representative food item of the group (M1)
4. Determination as unweighted mean of all members of the group (M2)
5. Determination as weighted mean of all members of the group (M3).
 - a) Weighted by external data (NVS)
 - b) Weighted by experts (TUM Nutrition Group)

COMPARISON OF NUTRIENT CONTENTS ESTIMATED BY DIFFERENT METHODS

The estimated contents of the following **nutrients** will exemplarily be presented:

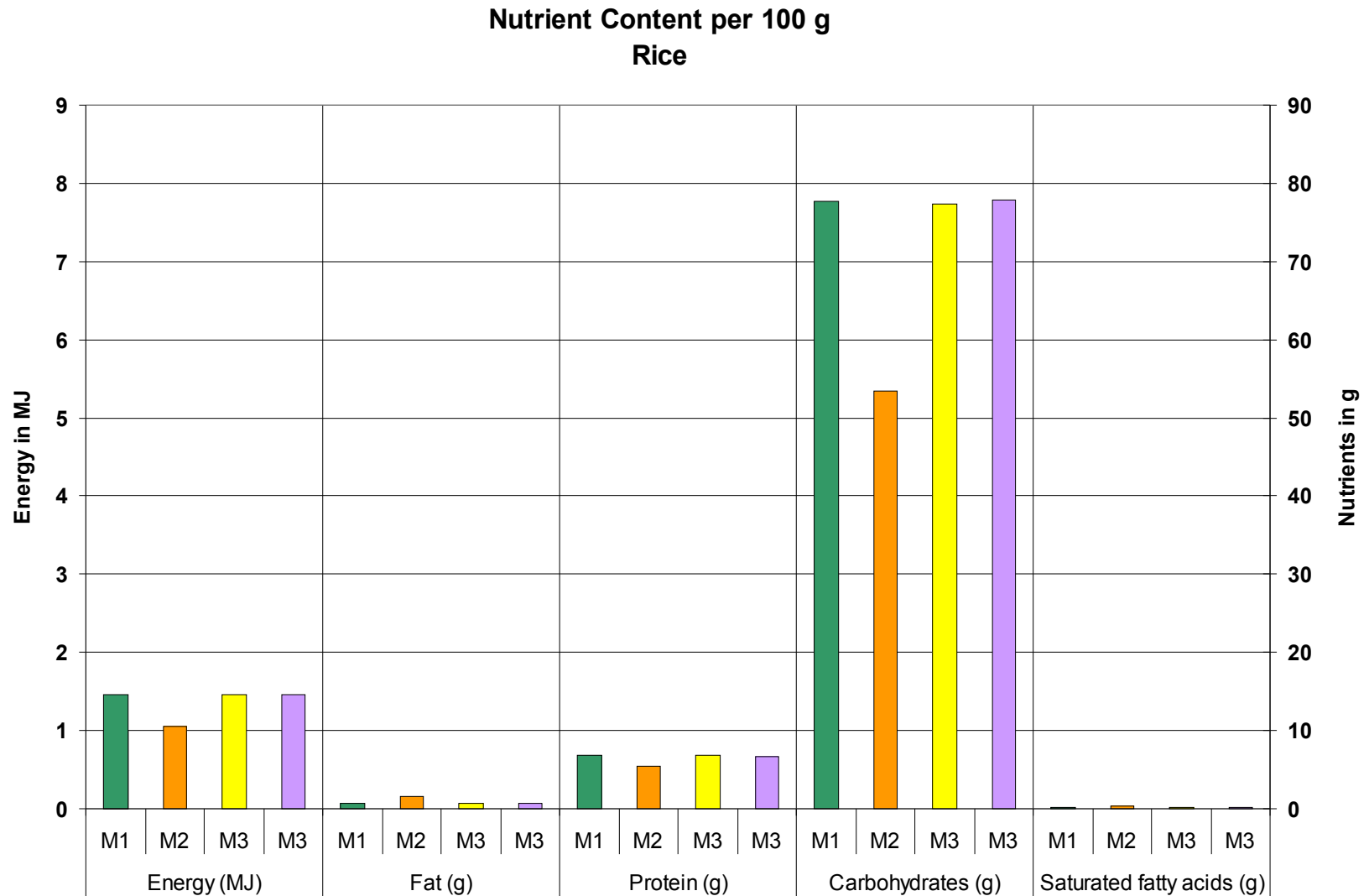
- Energy
- Fat
- Protein
- Carbohydrates
- Water
- Saturated fatty acids, MUFA and PUFA
- Sodium
- Calcium
- Vitamin C
- Vitamin E.

COMPARISON OF NUTRIENT CONTENTS ESTIMATED BY DIFFERENT METHODS

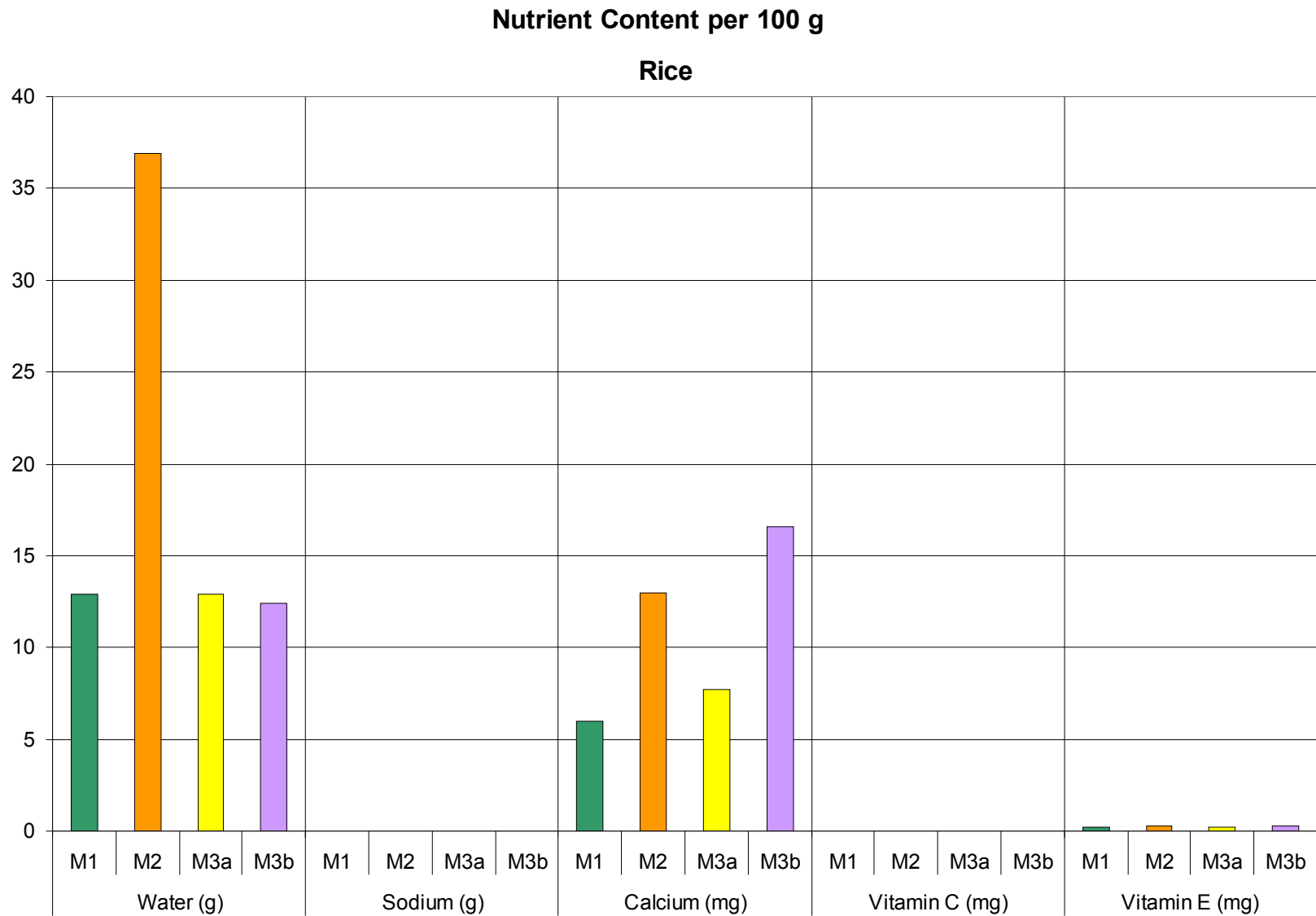
The following **food groups** will exemplarily be considered:

2. Rice
3. Non-white Bread (Graham bread, Gray bread)
4. Pork
5. Fish
6. Cheese (except cottage cheese)
7. Berries (e.g. Raspberry, Currant)
8. Potato products.

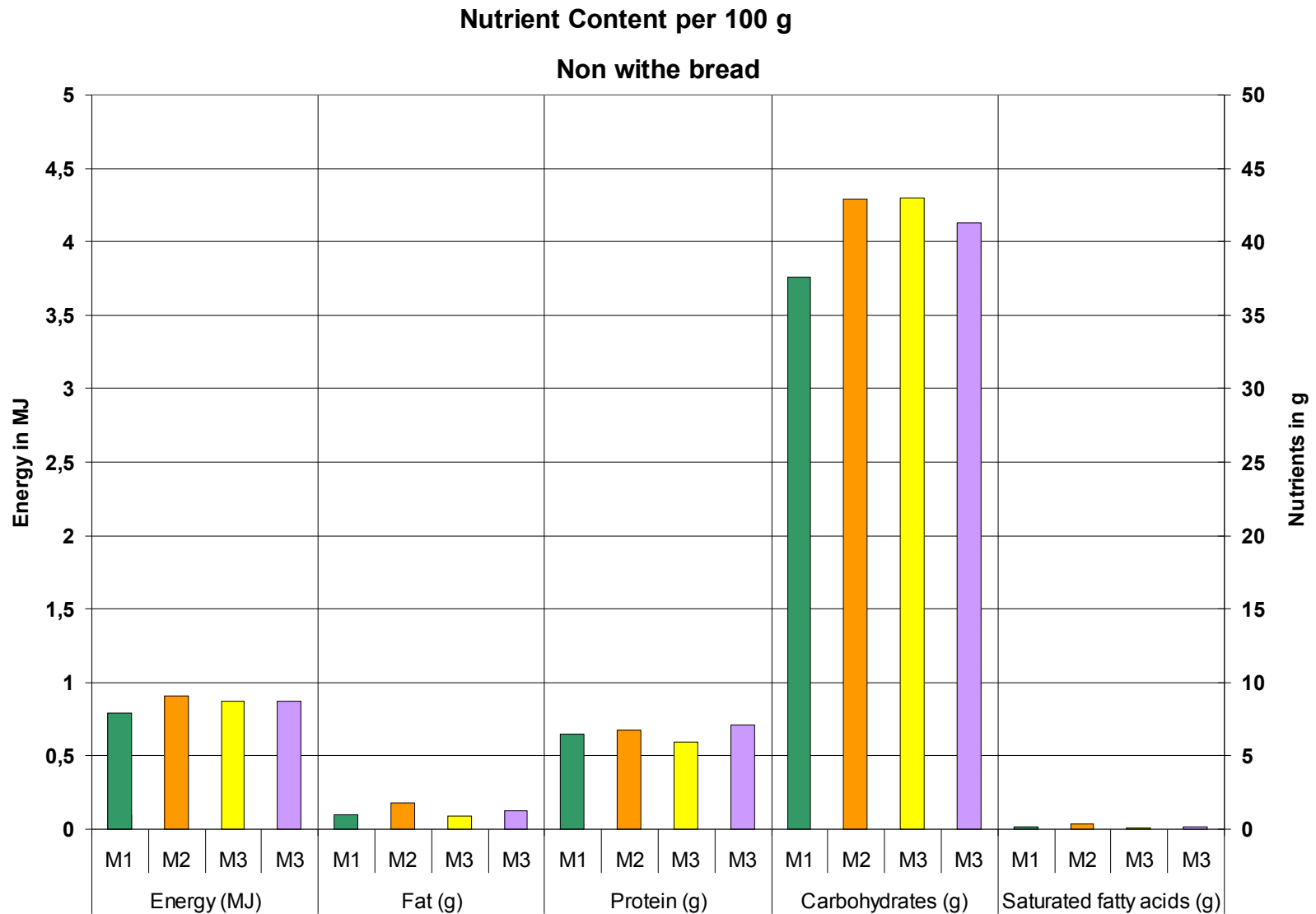
COMPARISON OF NUTRIENT CONTENTS ESTIMATED BY DIFFERENT METHODS



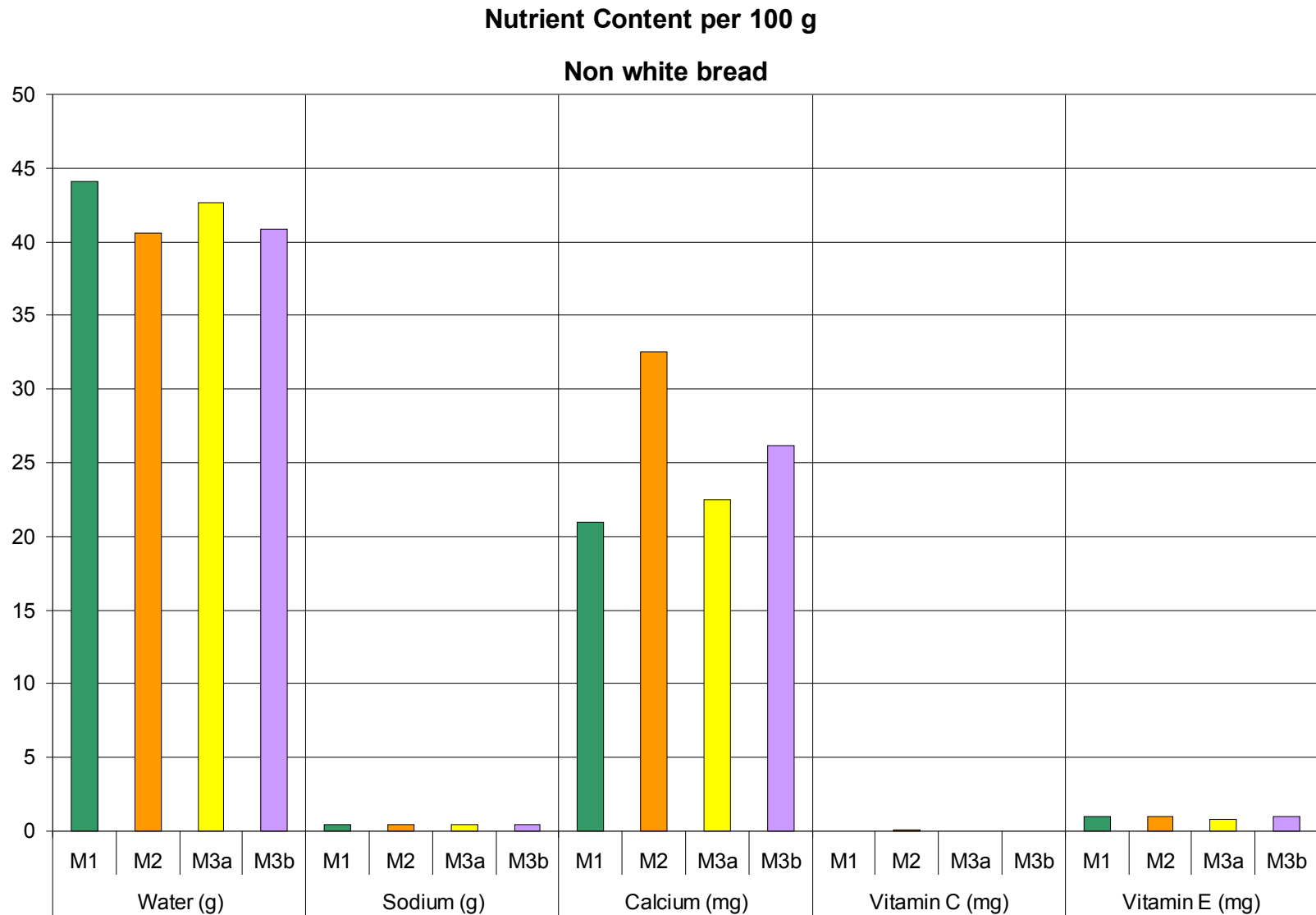
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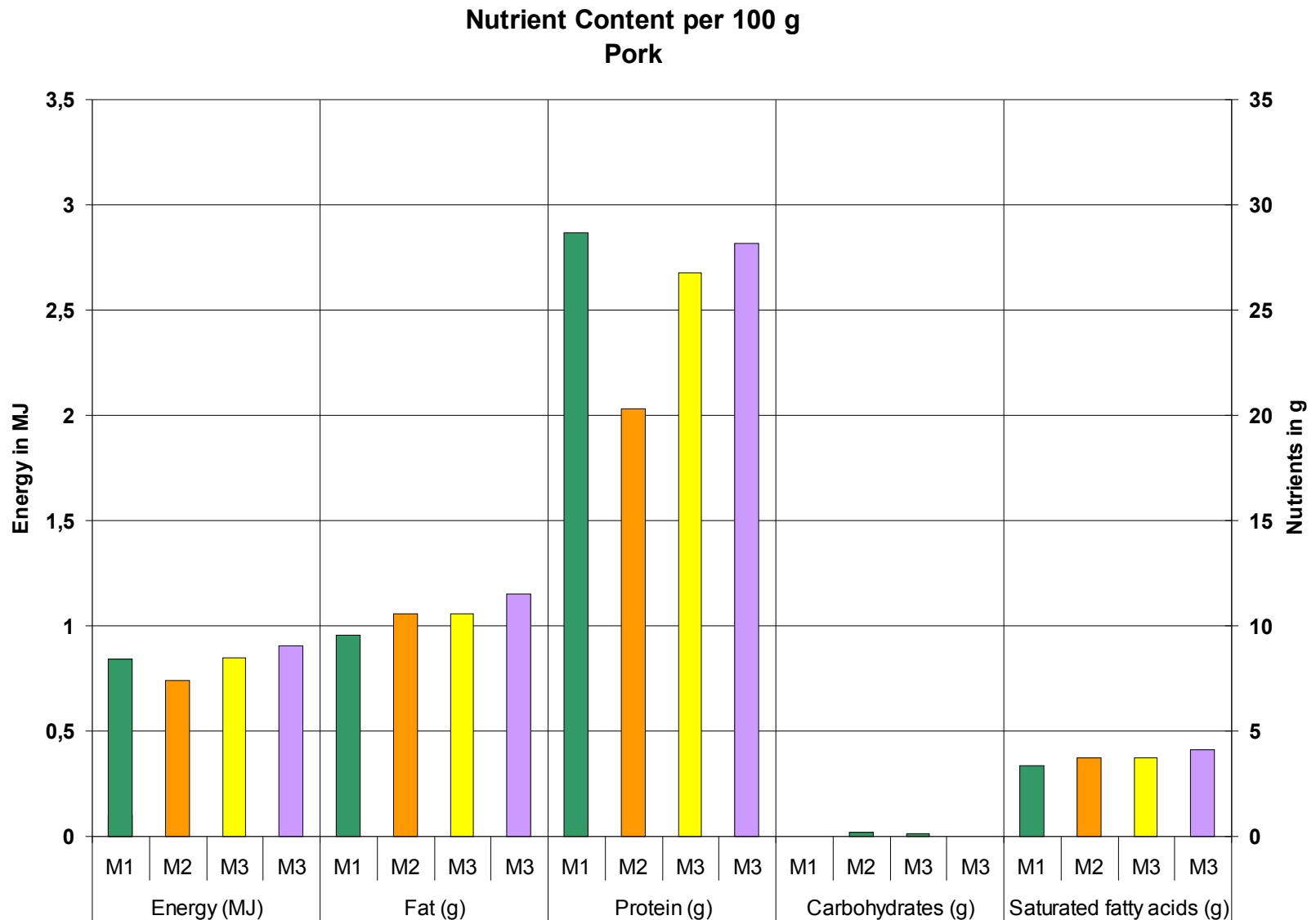
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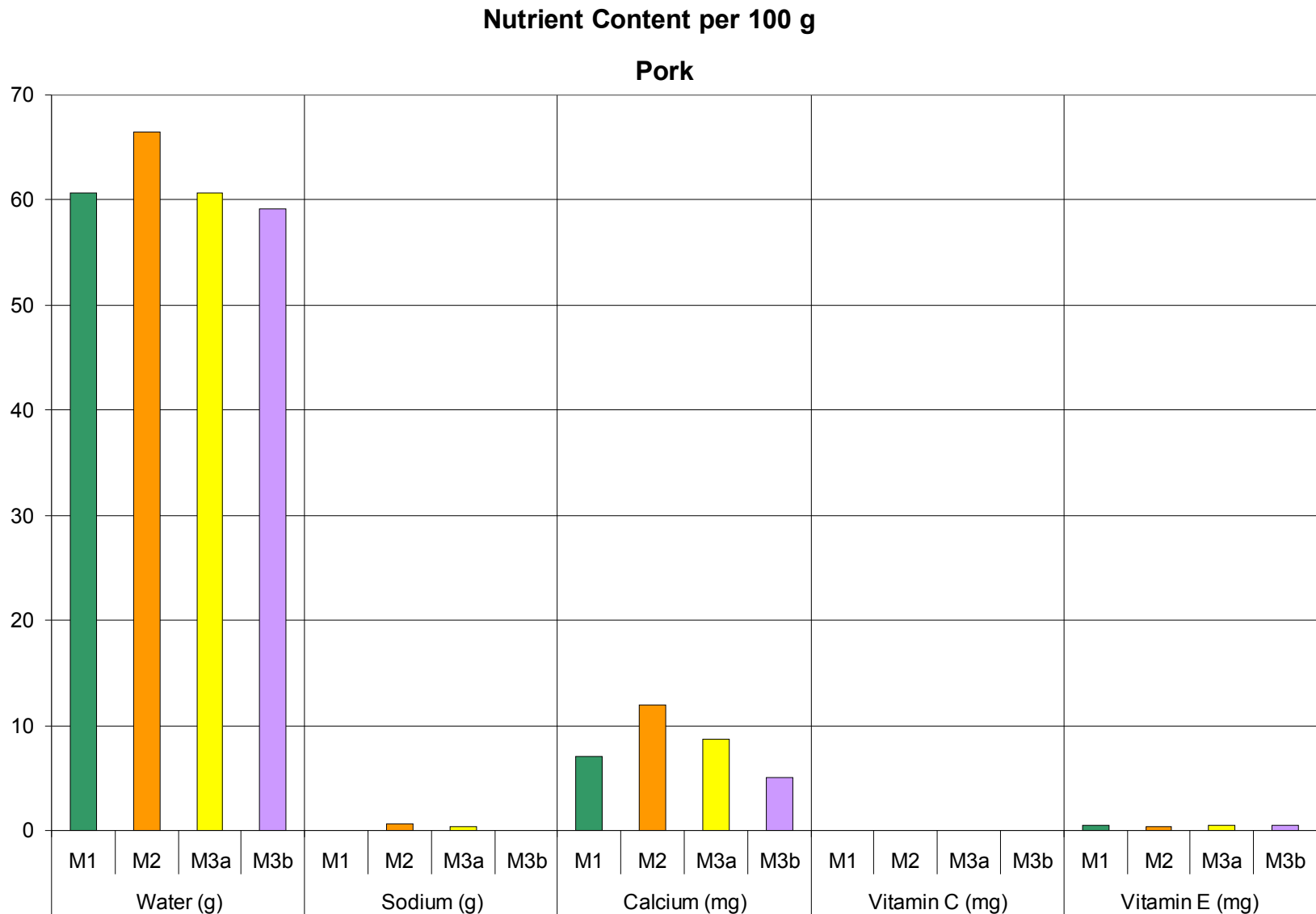
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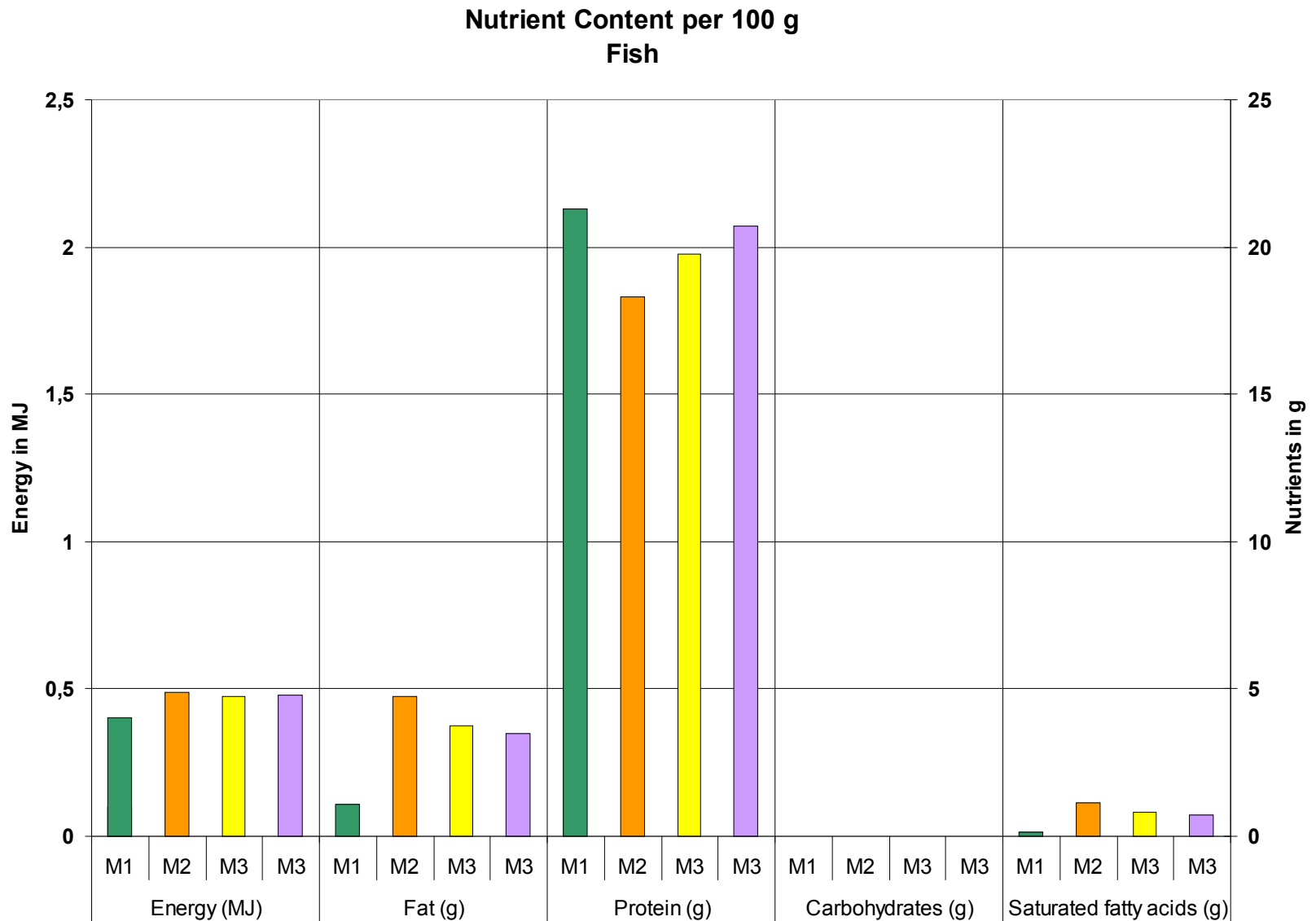
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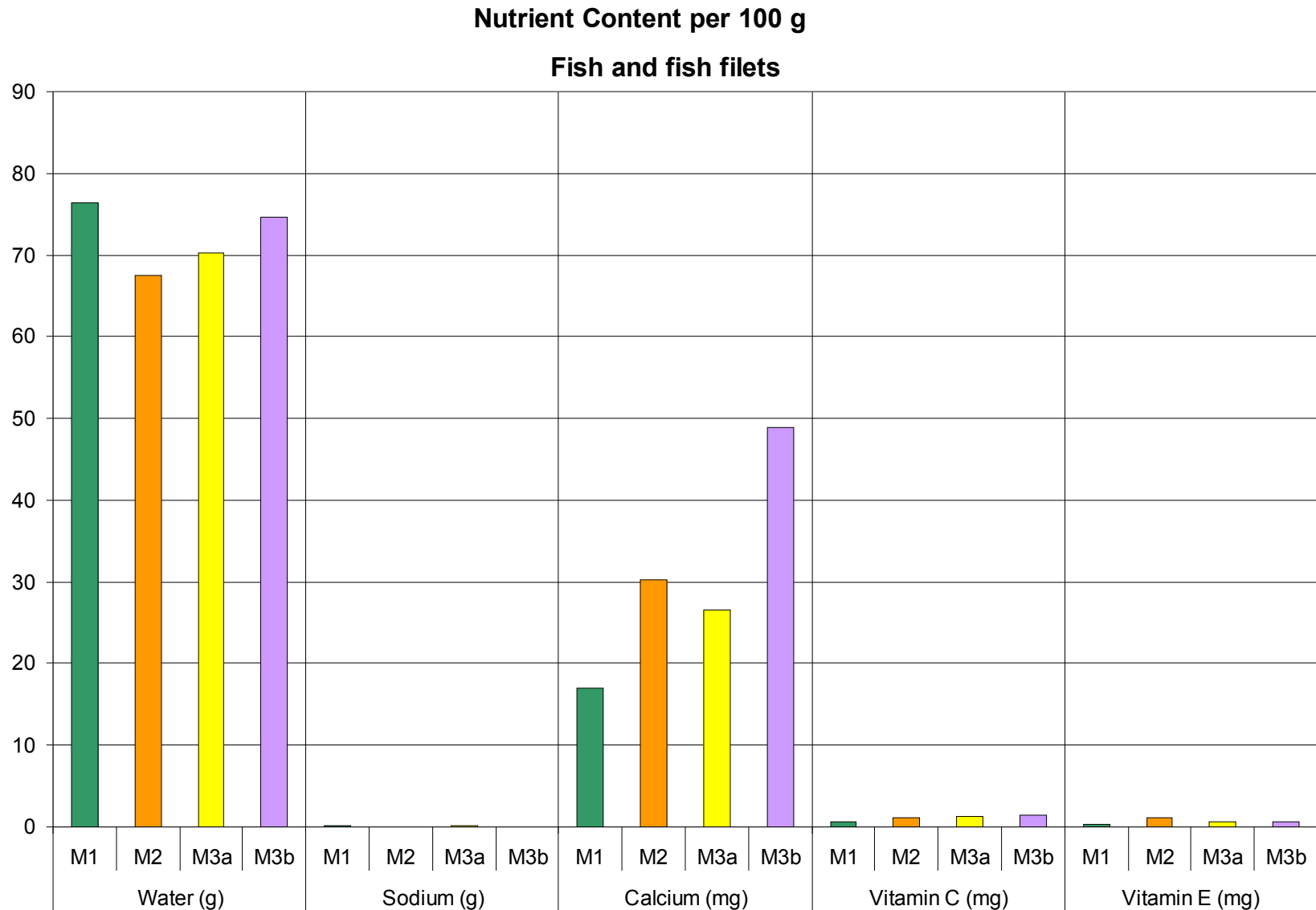
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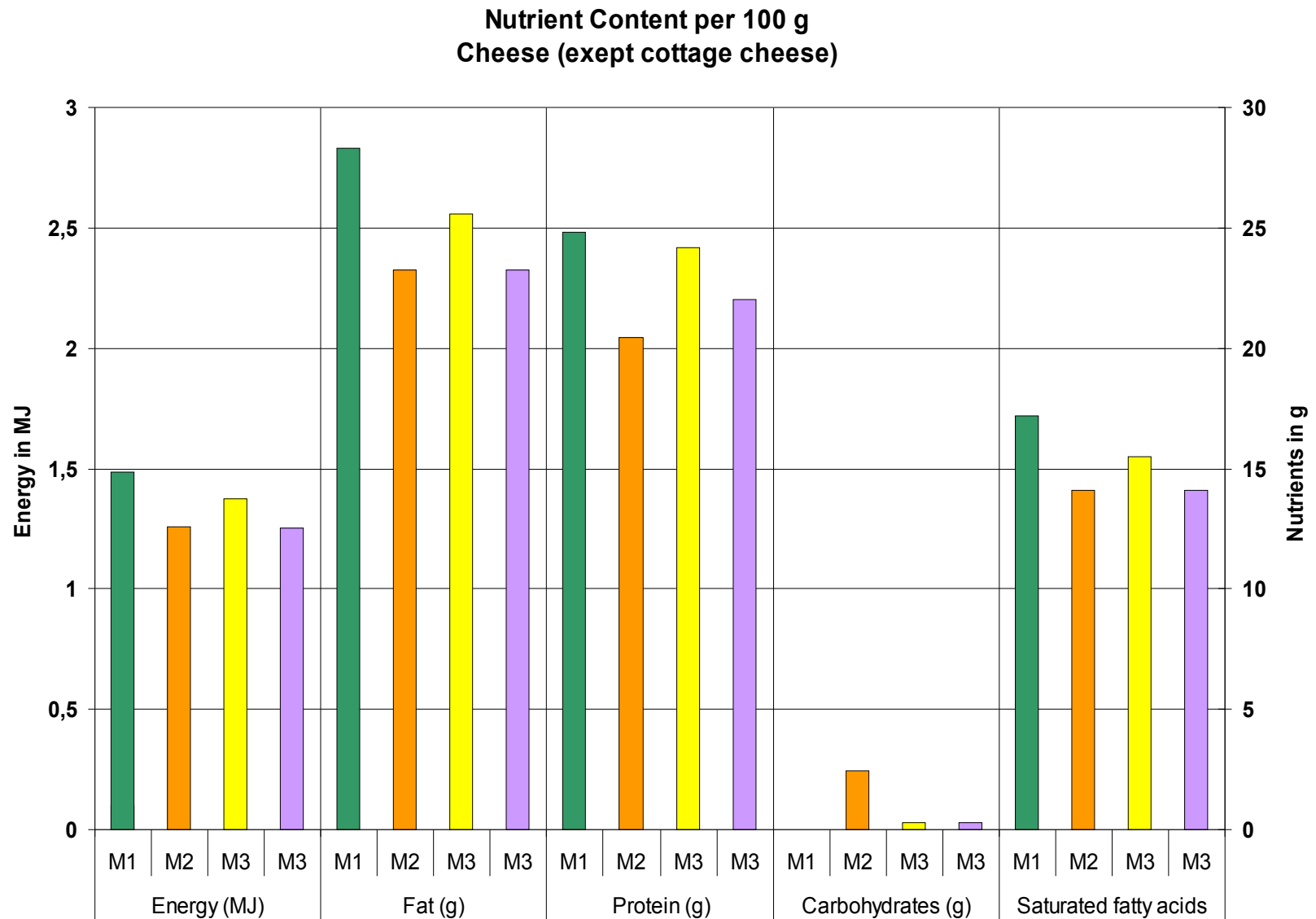
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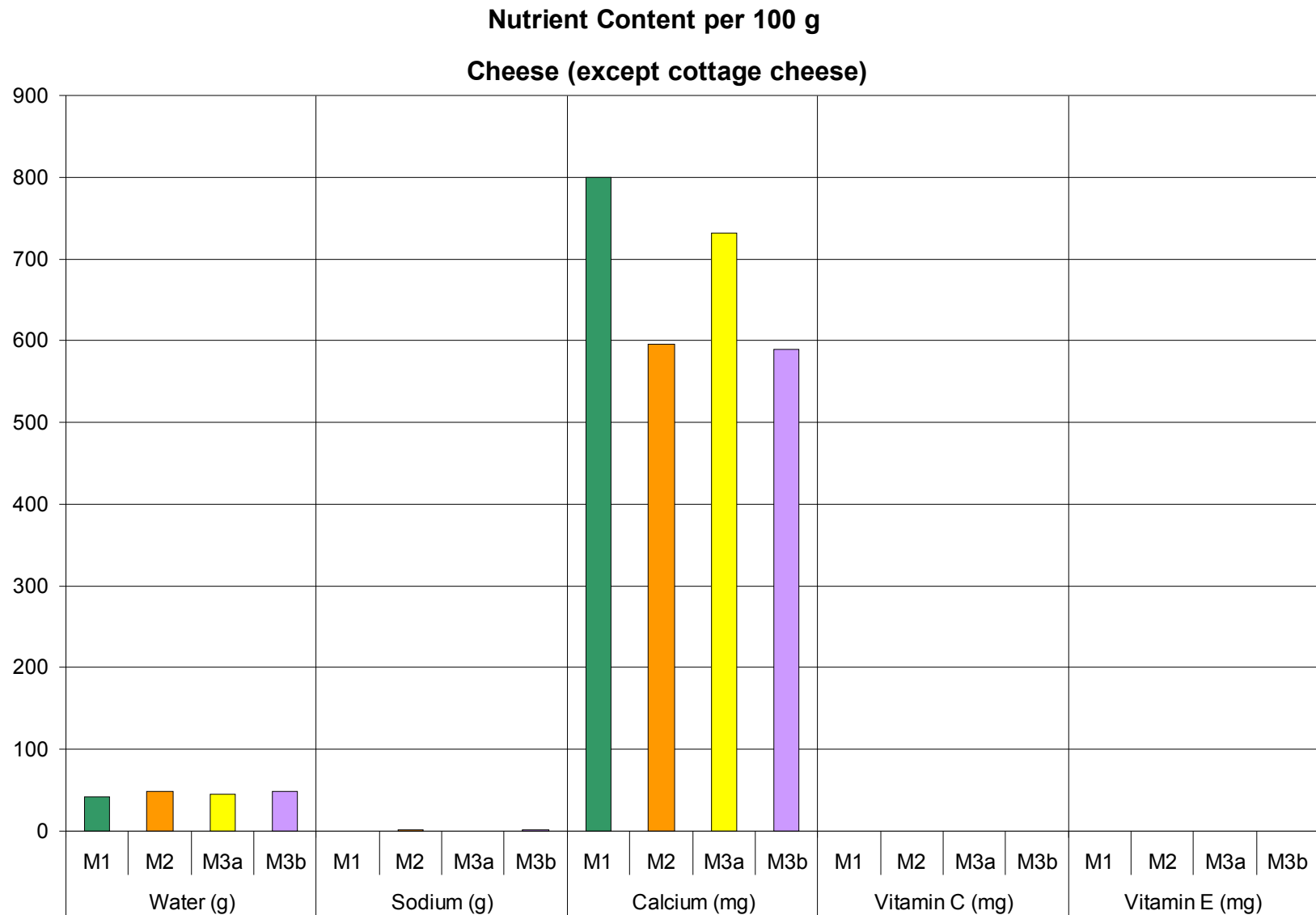
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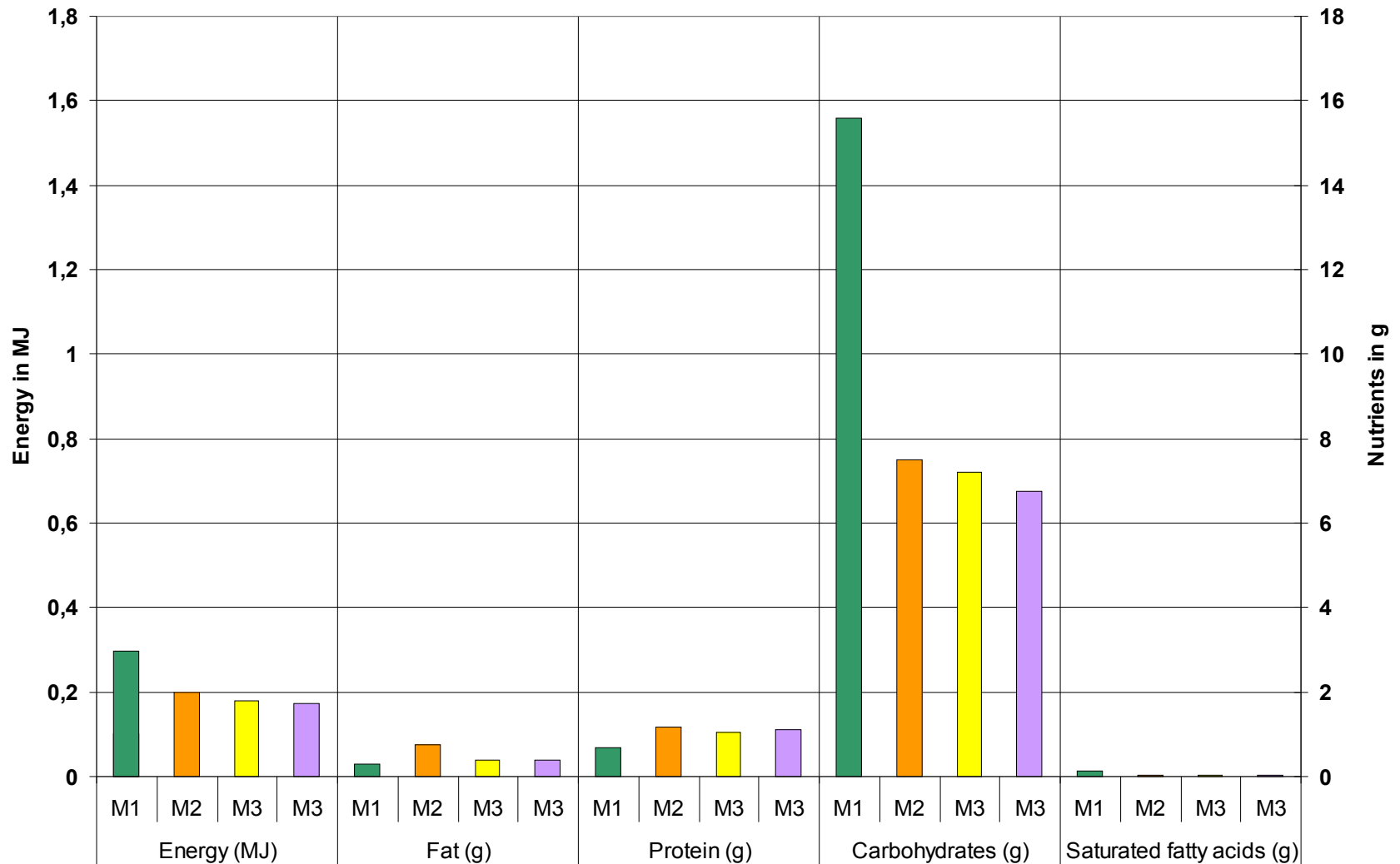


COMPARISON OF NUTRIENT CONTENTS ESTIMATED BY DIFFERENT METHODS



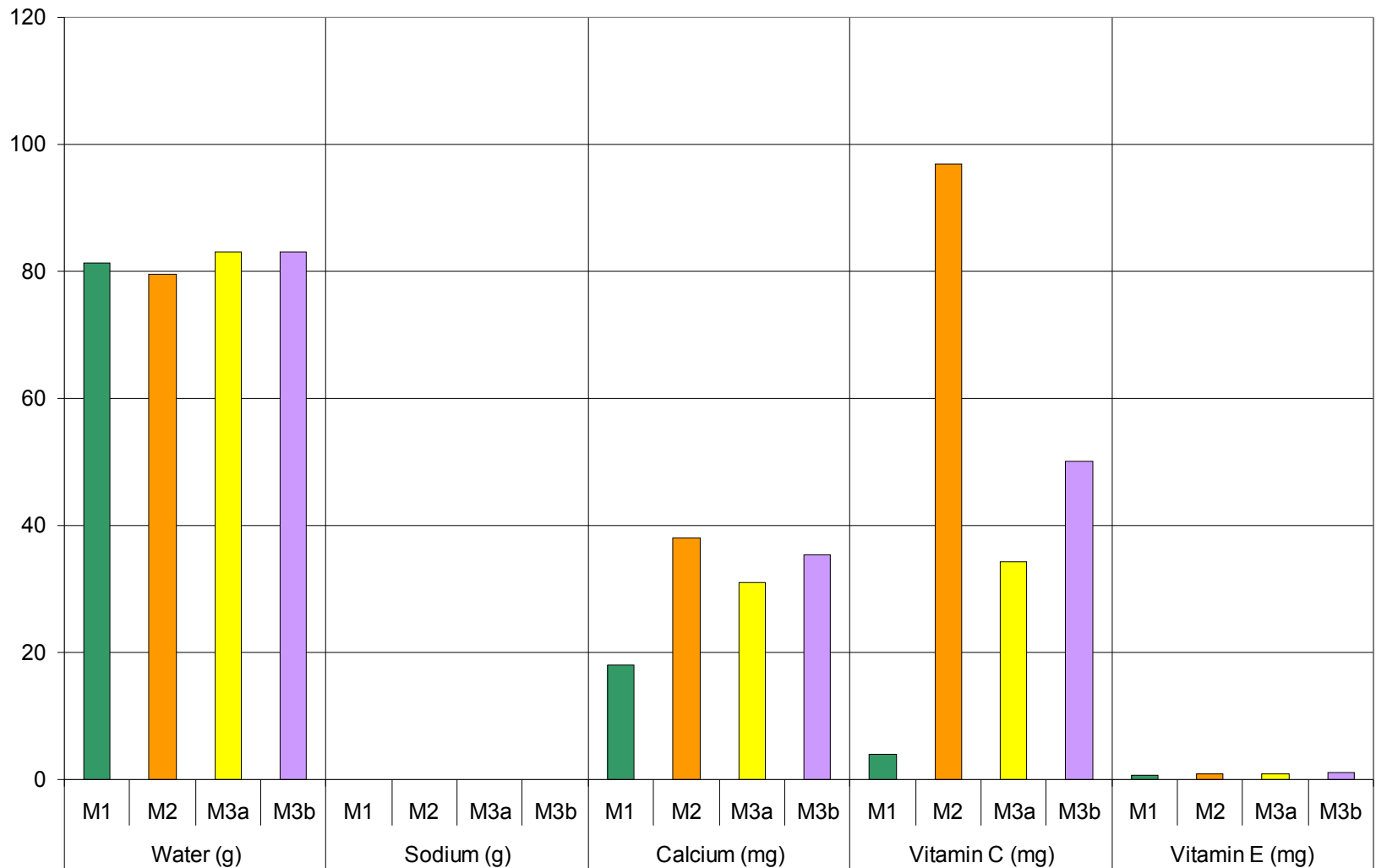
COMPARISON OF NUTRIENT CONTENTS ESTIMATED BY DIFFERENT METHODS

Nutrient Content per 100 g
Berries (except strawberry and grapes)

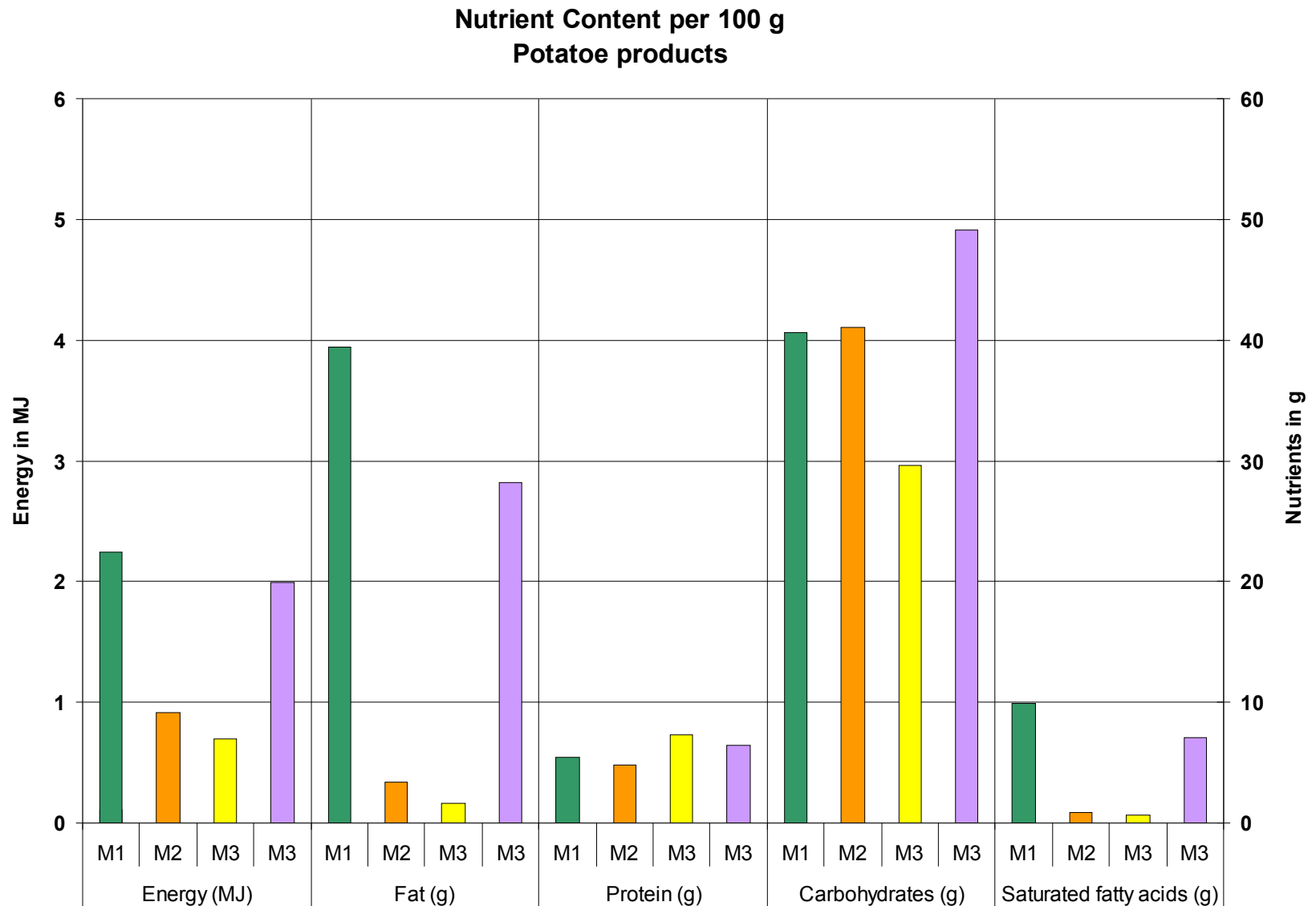


COMPARISON OF NUTRIENT CONTENTS ESTIMATED BY DIFFERENT METHODS

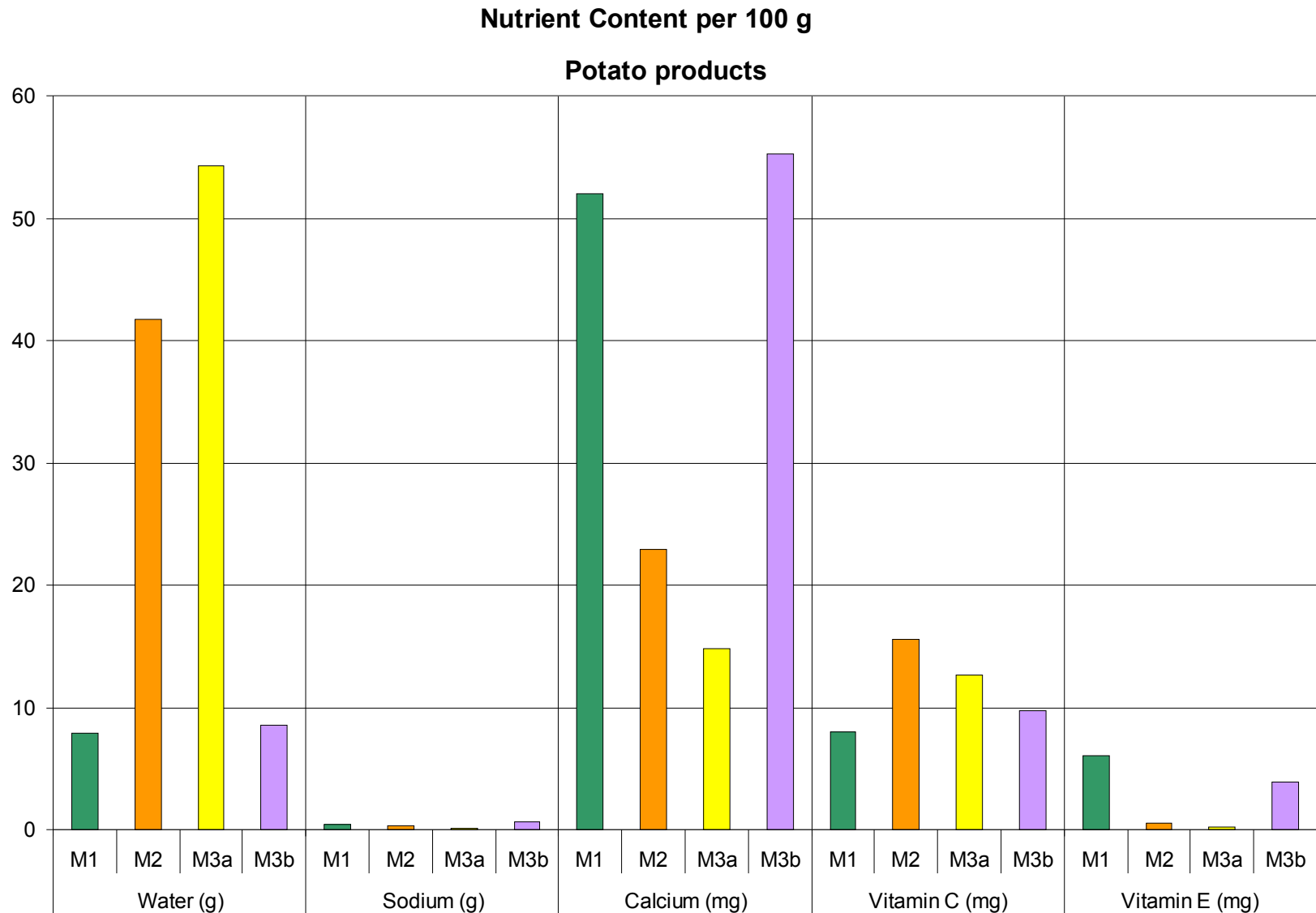
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Berries (except strawberry and grapes)



COMPARISON OF NUTRIENT CONTENTS ESTIMATED BY DIFFERENT METHODS



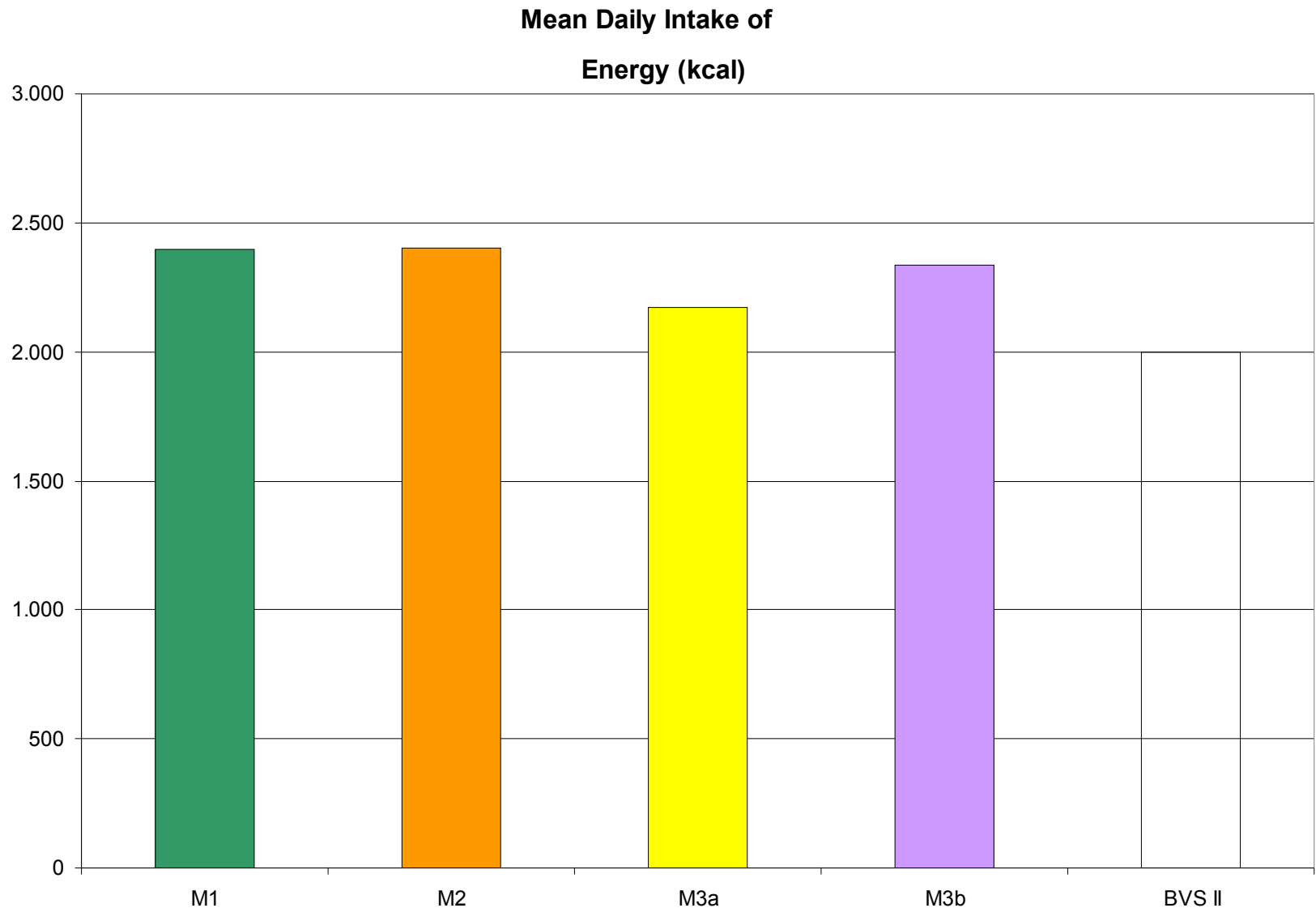
COMPARISON OF NUTRIENT CONTENTS ESTIMATED BY DIFFERENT METHODS



COMPARISON OF NUTRIENT INTAKES ESTIMATED BY DIFFERENT METHODS

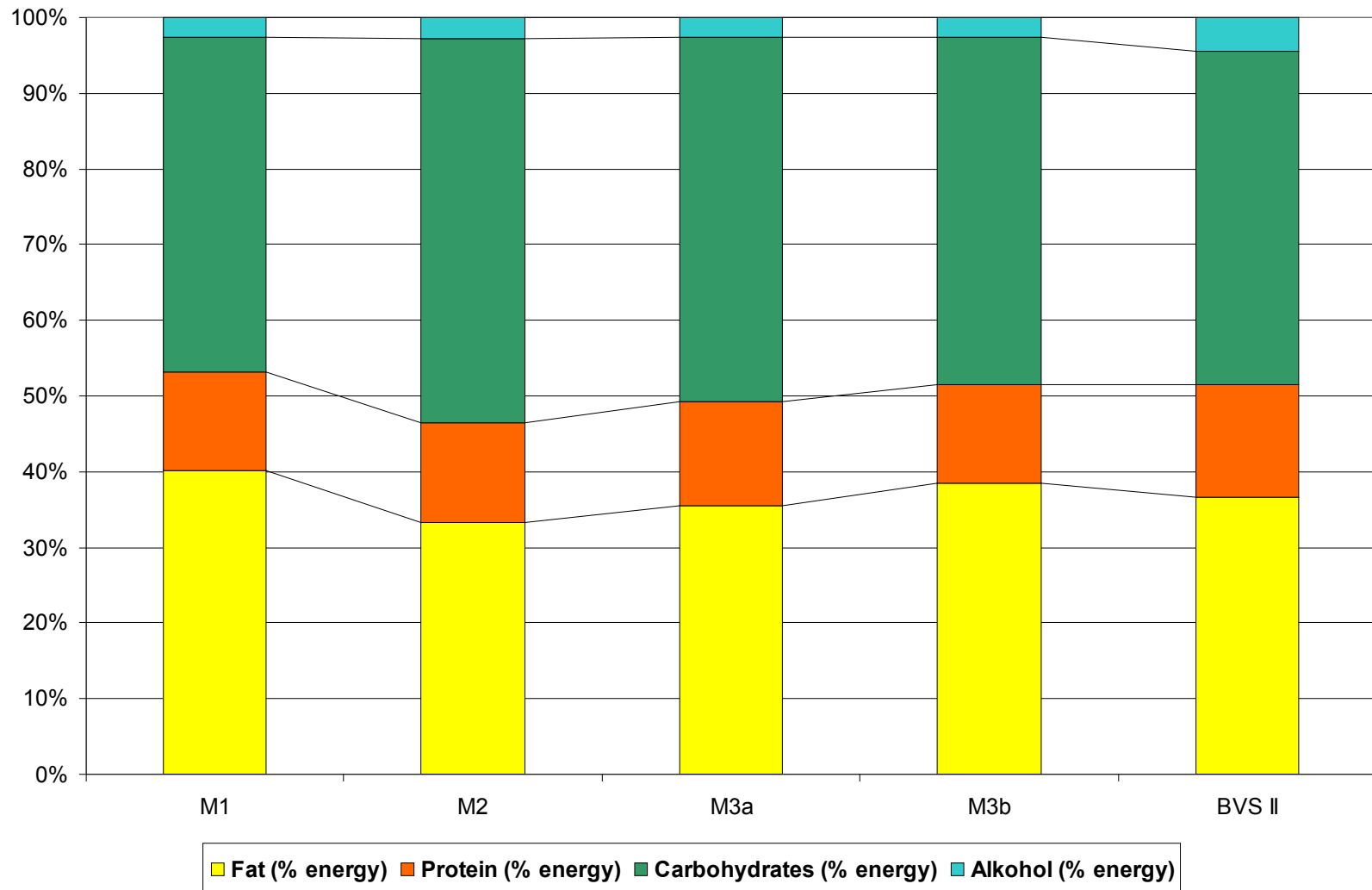
Do the differences
in estimated nutrient contents
level out
when total nutrient intakes
are regarded
?

COMPARISON OF NUTRIENT INTAKES ESTIMATED BY DIFFERENT METHODS

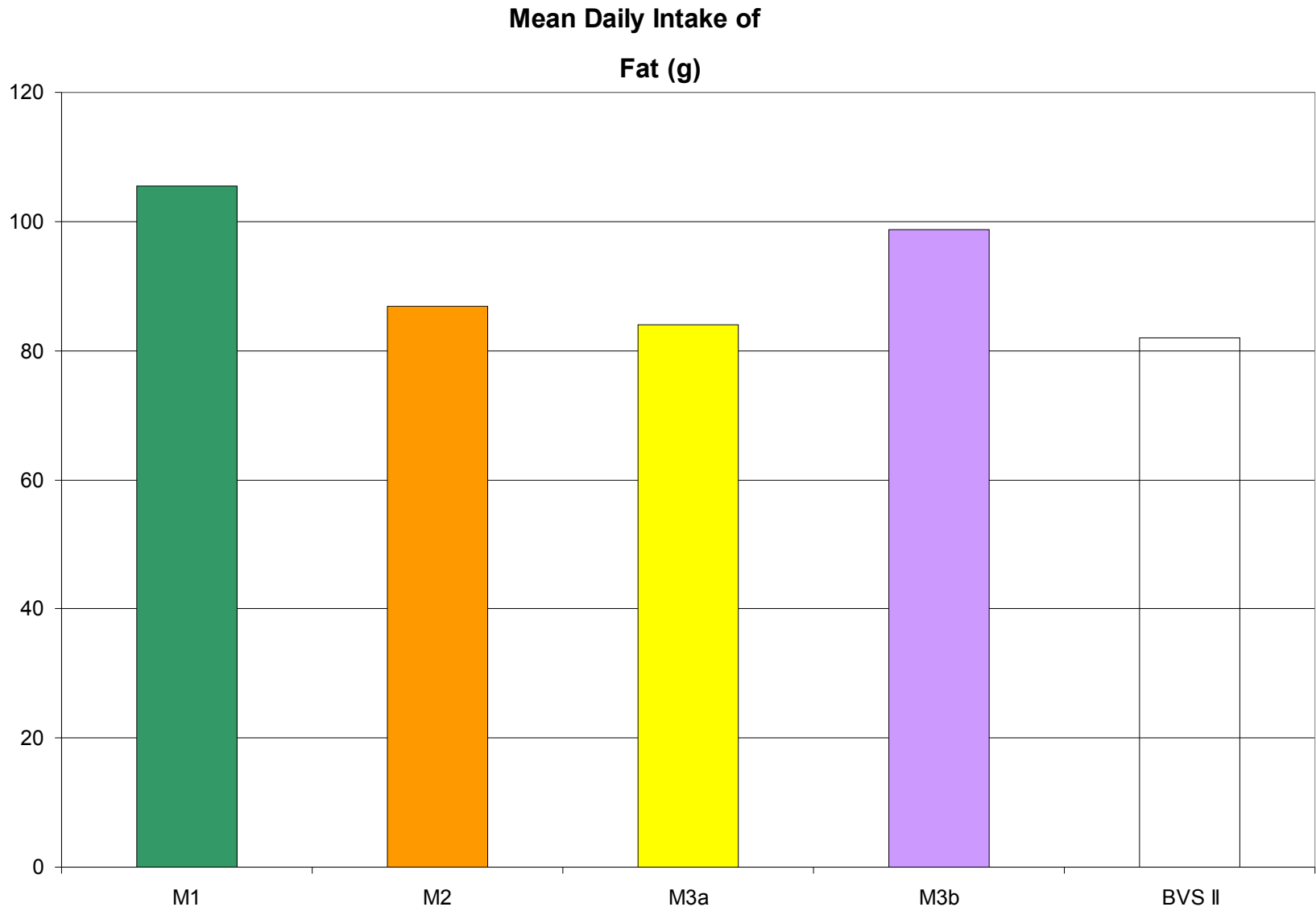


COMPARISON OF NUTRIENT INTAKES ESTIMATED BY DIFFERENT METHODS

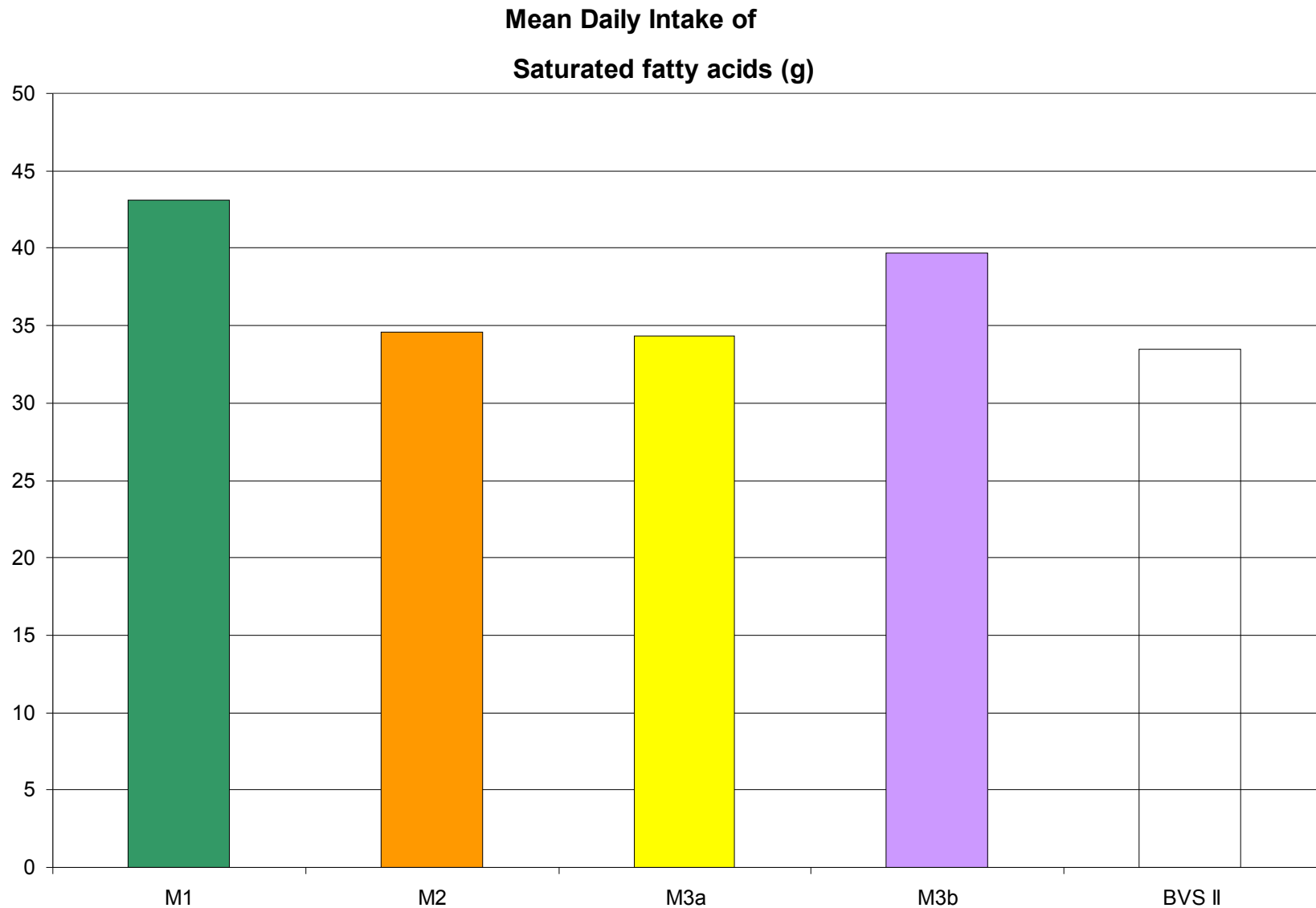
Composition of energy intake by macronutrients



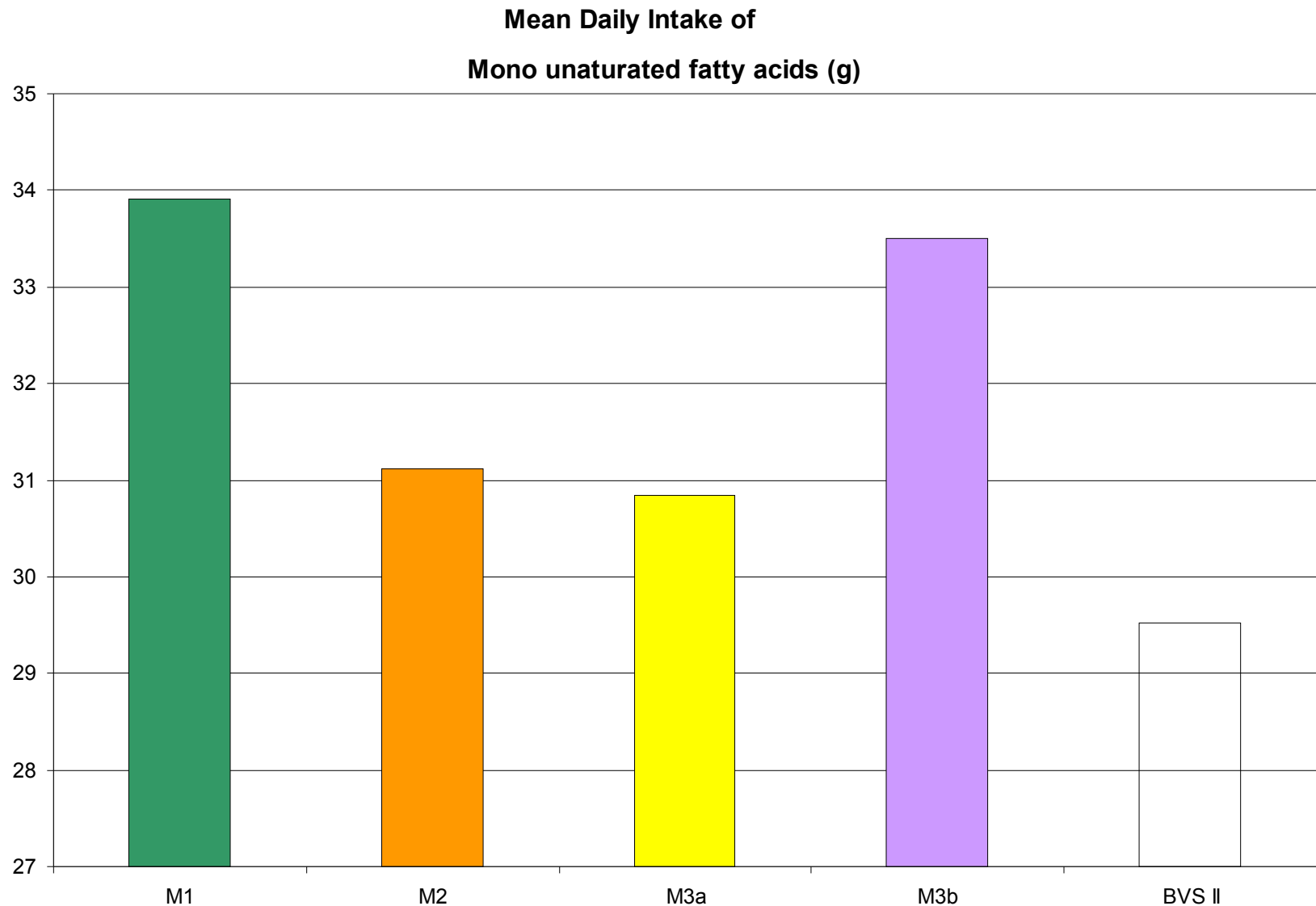
COMPARISON OF NUTRIENT INTAKES ESTIMATED BY DIFFERENT METHODS



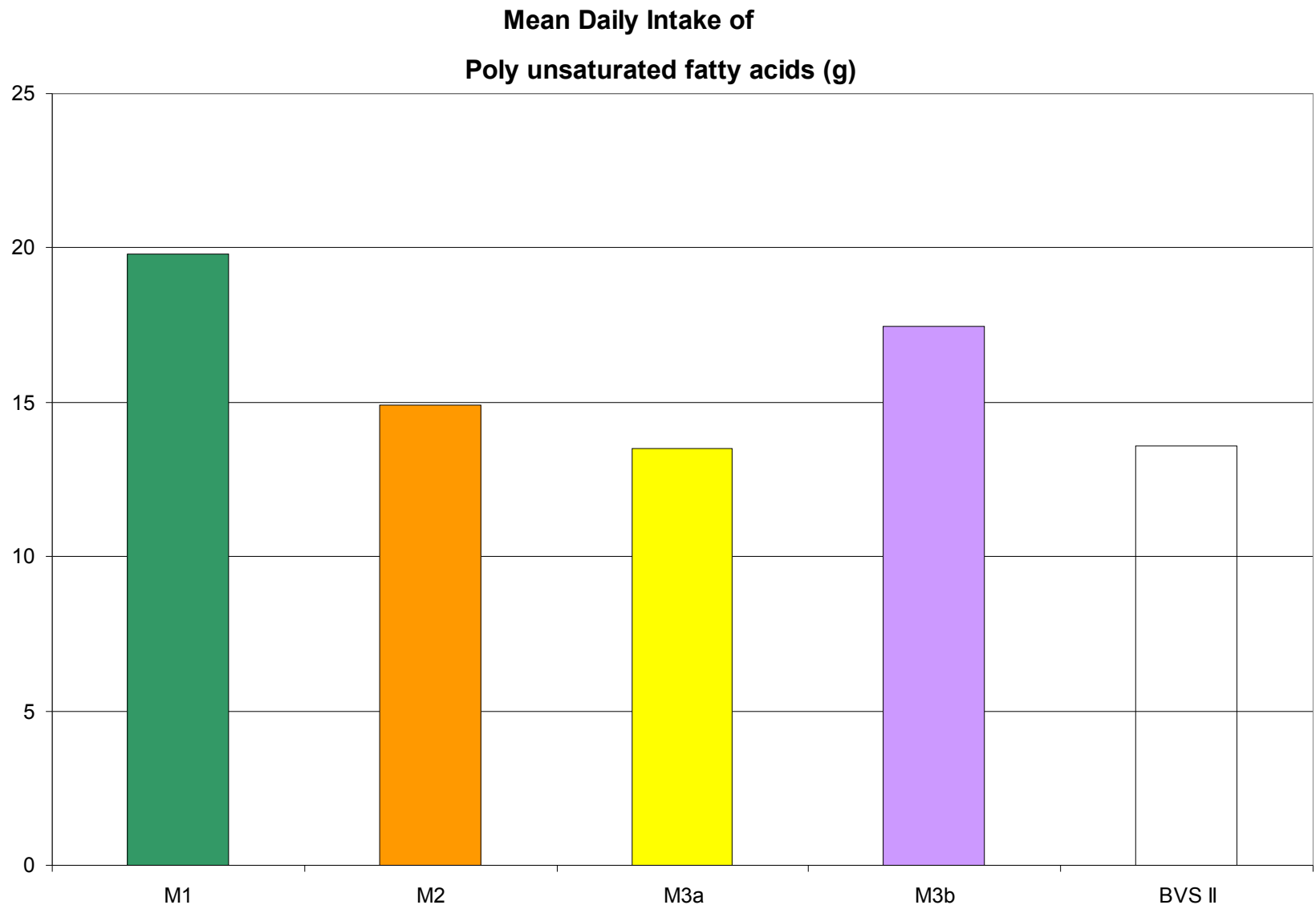
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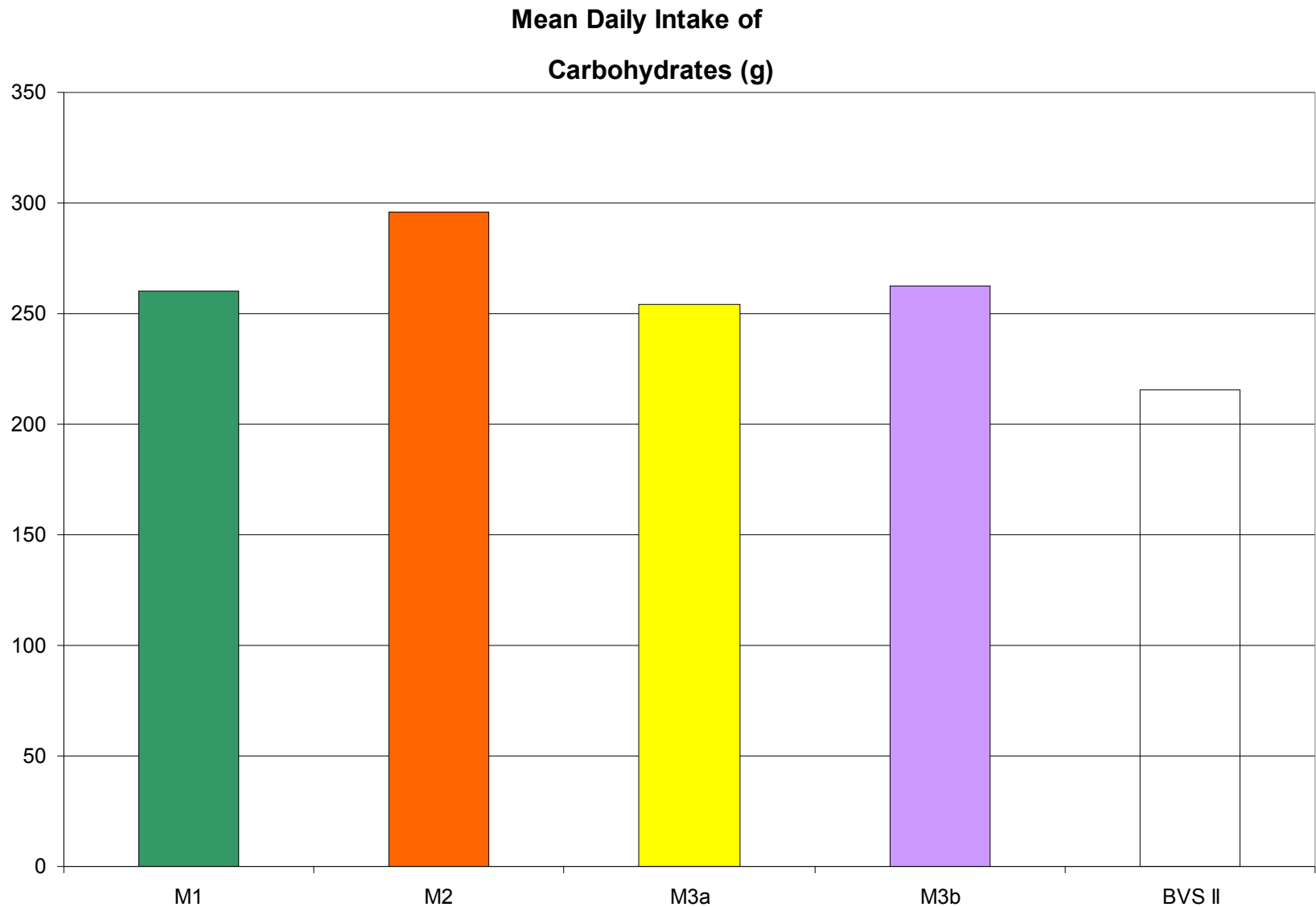
COMPARISON OF NUTRIENT INTAKES ESTIMATED BY DIFFERENT METHODS



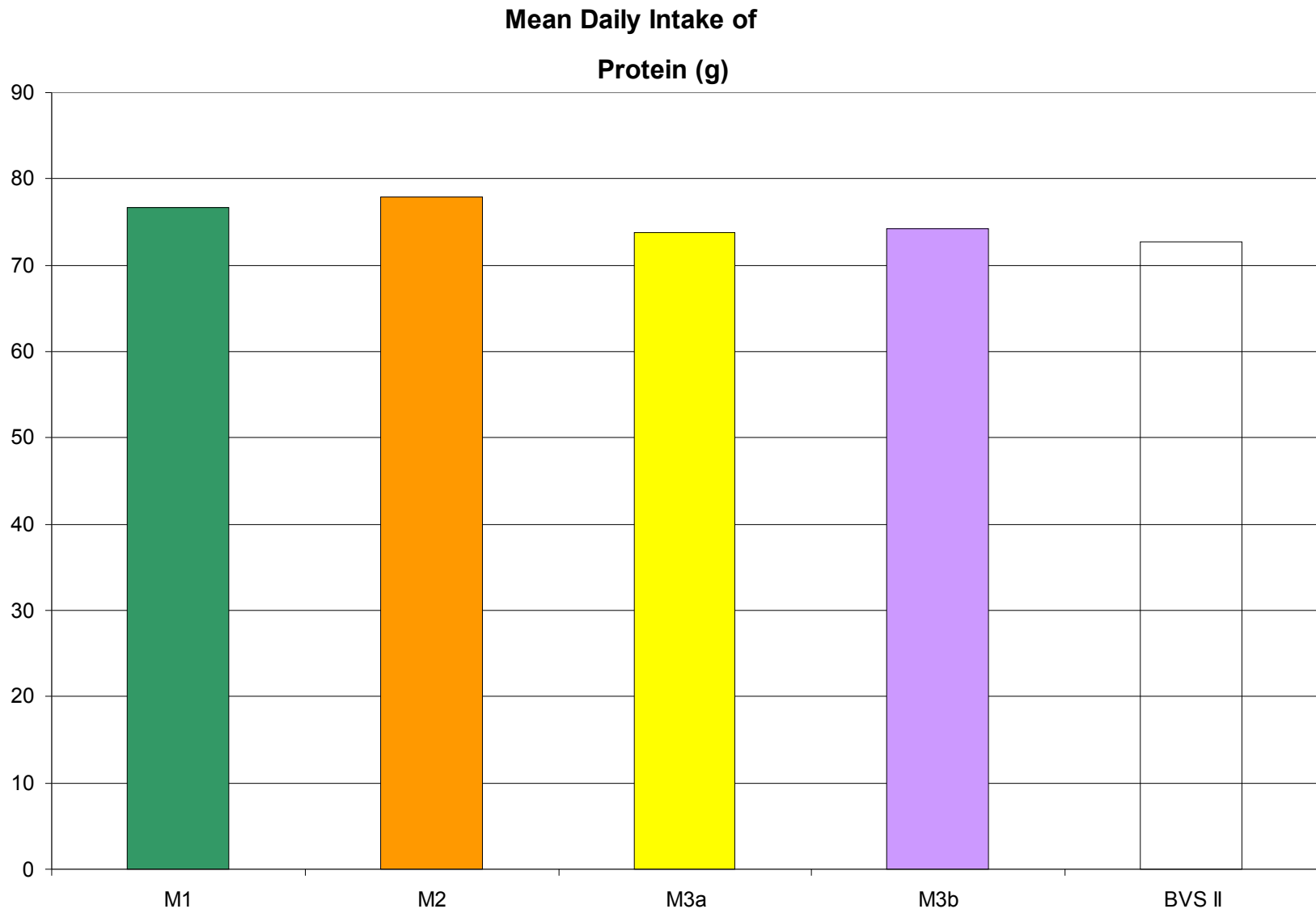
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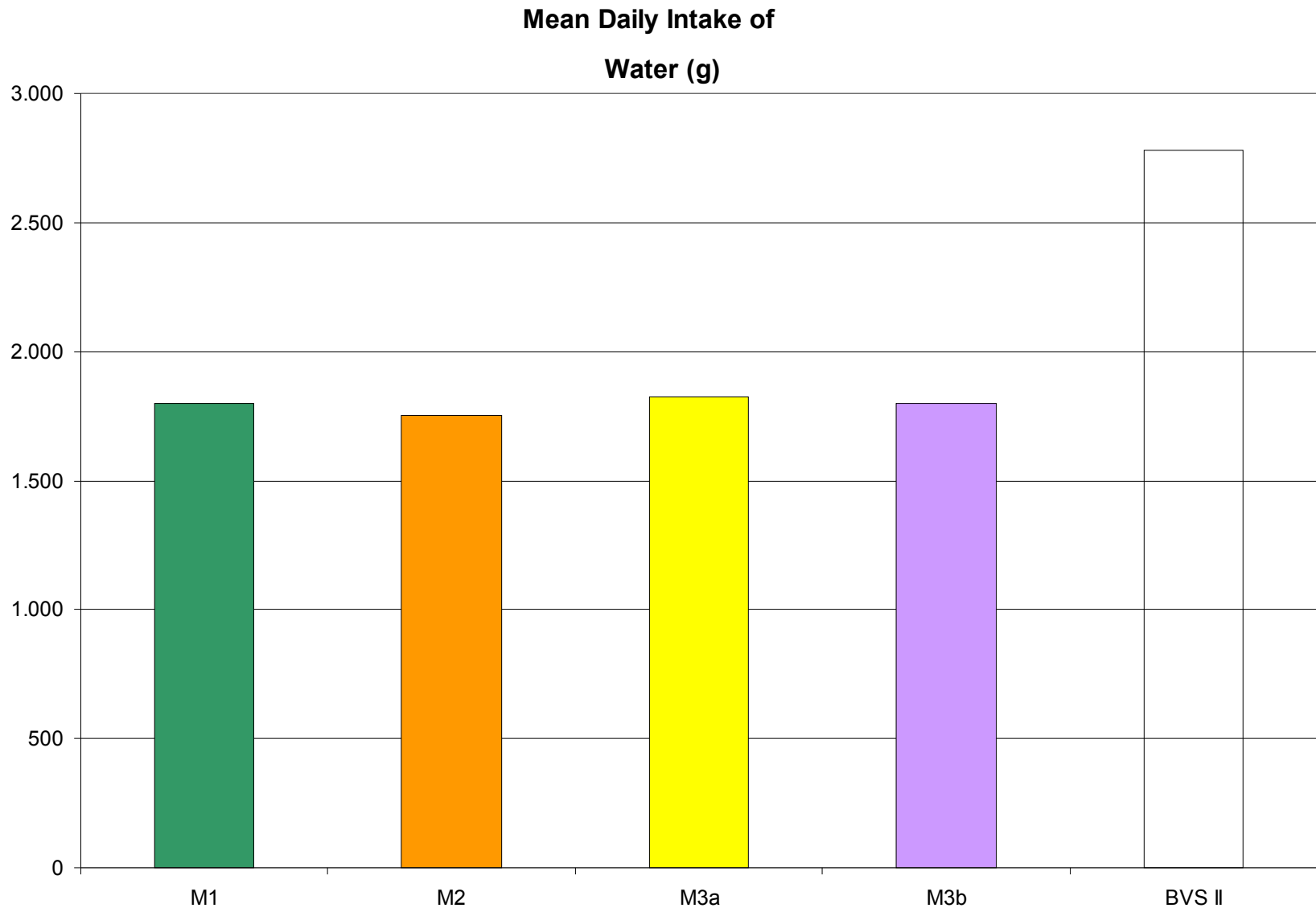
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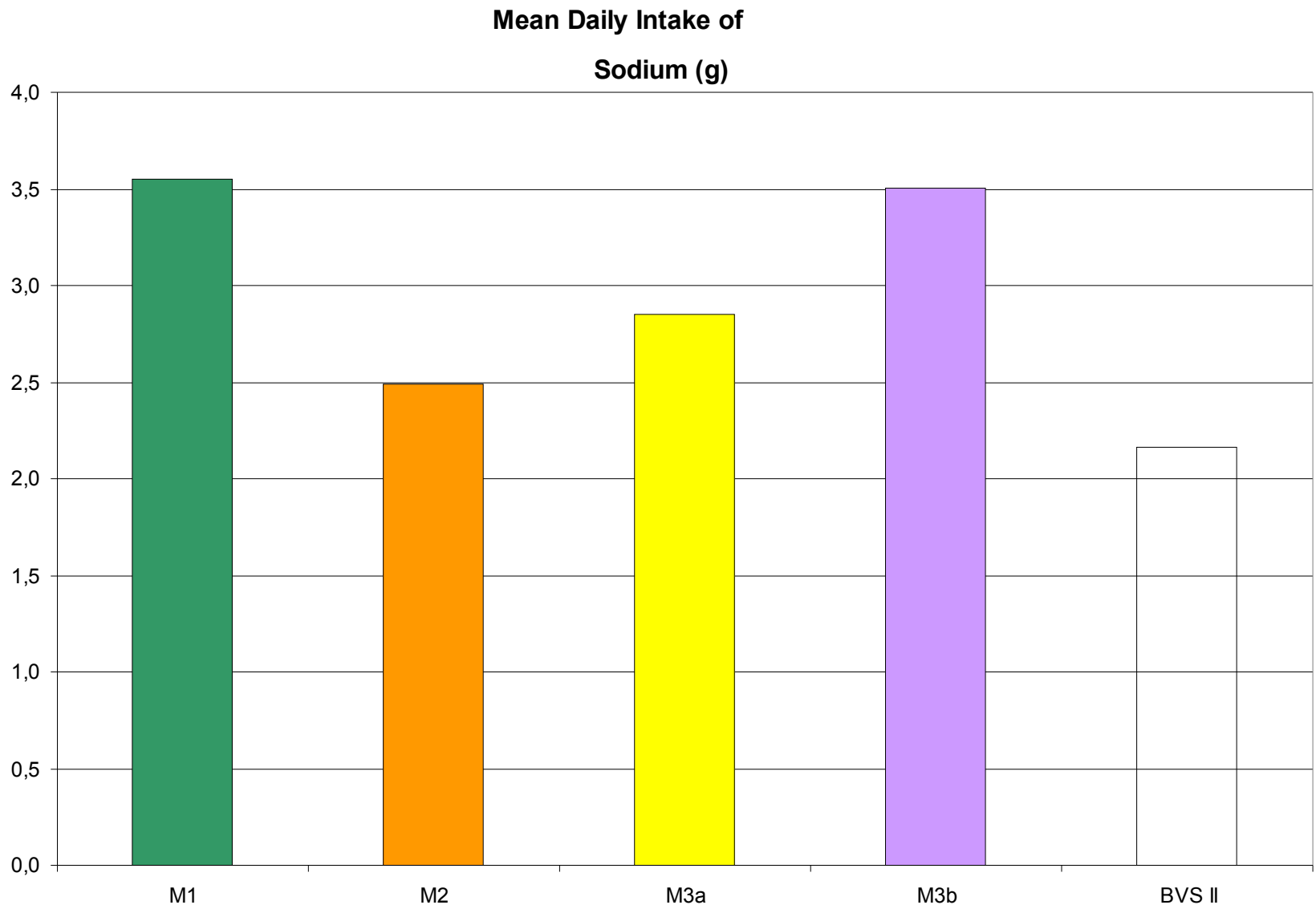
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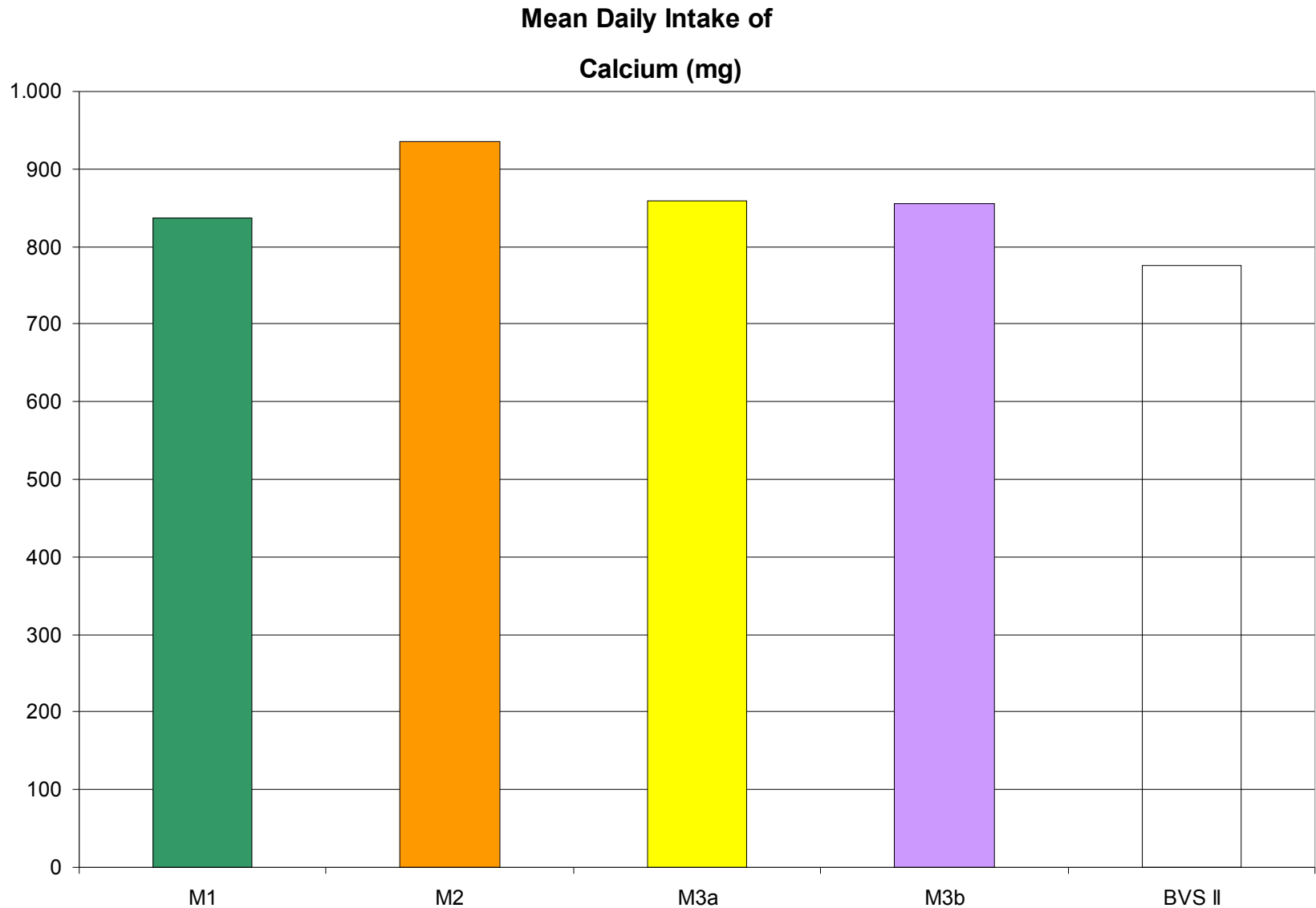
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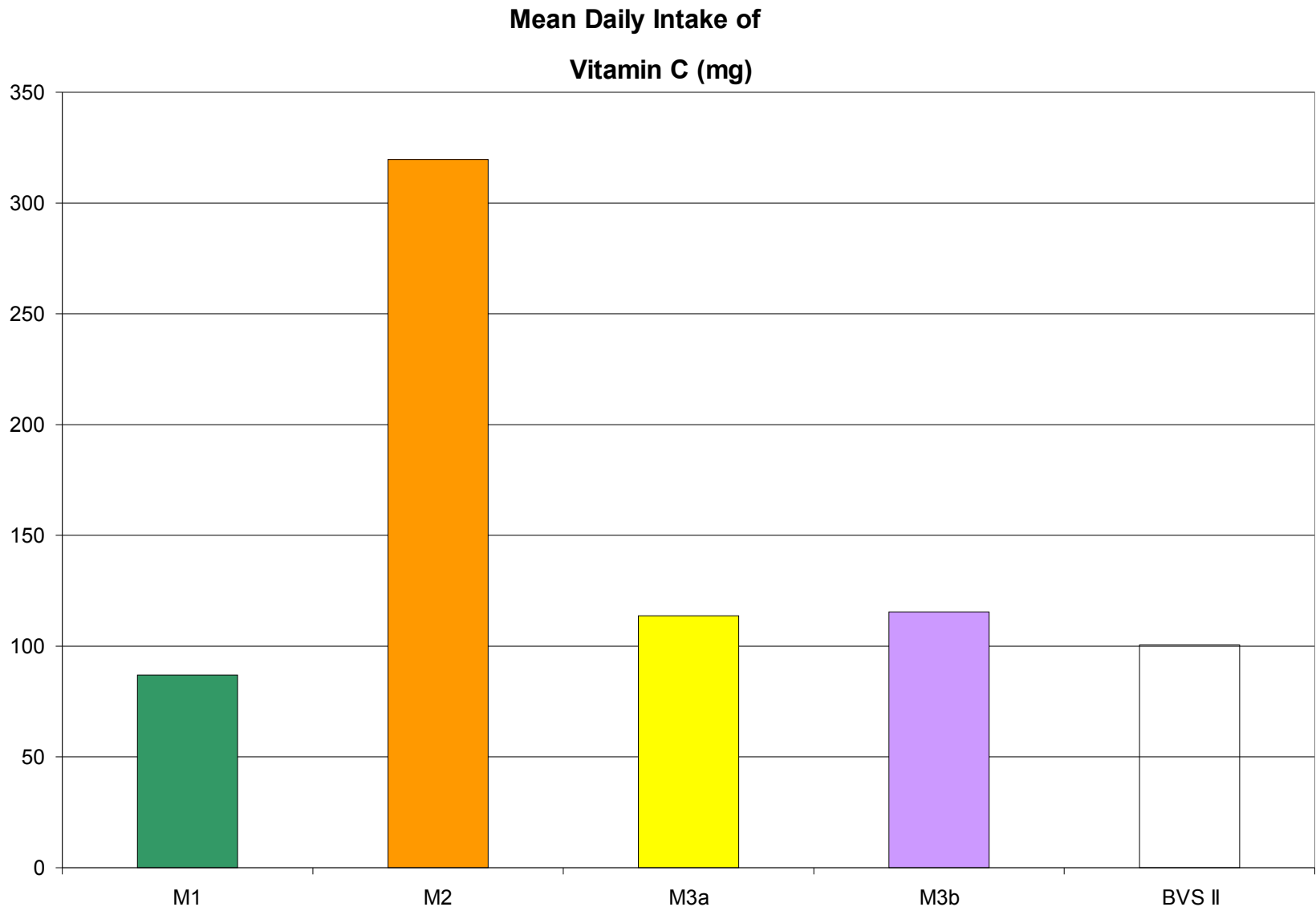
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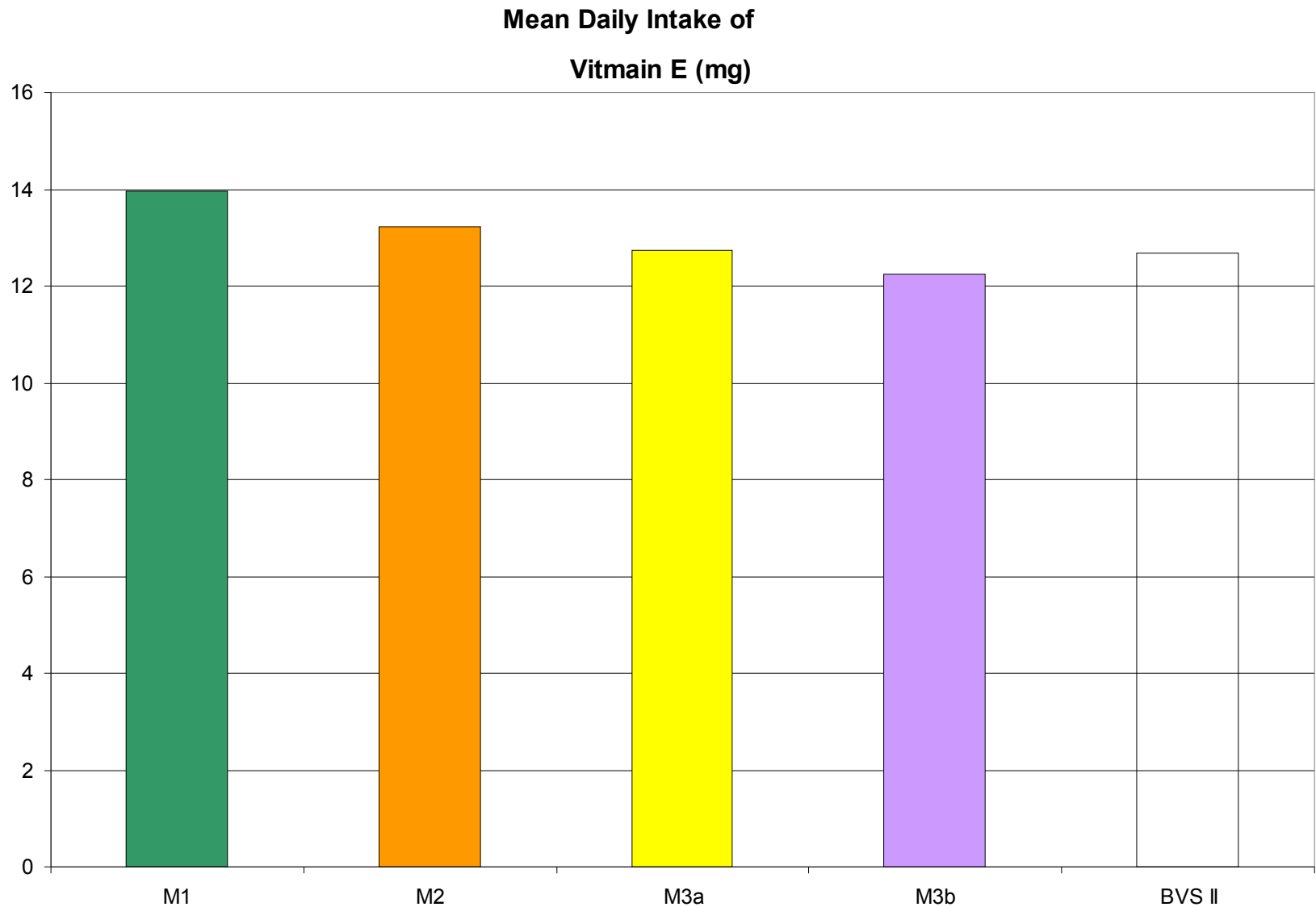
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COMPARISON OF NUTRIENT INTAKES ESTIMATED BY DIFFERENT METHODS: SUMMARY

	Energy	Fat	SFA	MUFA	PUFA	Carboh.	Prot.	Water	Sodium	Ca	Vit.C	Vit.E	Total
M1	3	4	4	3	4	3	3	1	4	1	3	4	3,08
M2	3	2	1	2	2	4	4	1	1	4	4	2	2,50
M3a	1	1	1	1	1	1	1	1	2	2	1	1	1,17
M3b	2	3	3	3	3	2	2	1	3	2	1	2	2,25

M3a has the best over all performance, M3b is closest to M3a.

CONCLUSIONS

The 4 methods evaluated partly yield considerable different estimates of nutrient contents of food groups.

The different estimates of nutrient contents of food groups partly level out, when nutrient intakes are calculated, but partly remain !

It appears to be recommendable to use method M3a, if any possibility to do so exists.

Otherwise, M3b can clearly be favoured, before M1 and M2.

TRANSFORMATION OF FOOD CONSUMPTION INTO NUTRIENT INTAKES

The

End !

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