* In relation to the amount of data presented in the manuscript, the paper is not suitable as a full research paper but rather as a brief communication. Please amend the manuscript to fit this format, i.e. shorten the text substantially and remove non-relevant information (see comment from Reviewer 1).
* The purpose of the study is according to the authors “To determine the effects of season (summer *versus* winter), climate (approximated by comparing New York *versus* Alaska), and diet (approximated by captive and therefore supplemented *versus* free-range) on selenium and vitamin E in reindeer”. The editor agrees with Reviewer 1 that the results presented in the paper do not fulfill the purpose of the study. Please change/remove text and demonstrate more clearly how your results/conclusions match your research purpose of this study.

Line 205-207

Can the authors please clarify the statement about unique properties of reindeer blood that they are referring to as a challenge to the laboratory? A reference to support this statement would be useful.

The authors encountered the problem unexpectedly while analyzing samples and were unaware that a reference existed, but as it turns out, viscosity of reindeer blood has been studied. This reference has been added.

Reviewers' comments are appended below. Reviewer 2 also provided comments directly in the manuscript which is attached as a separate Word document.

If you decide to revise the work, please submit a list of changes against each point which is being raised from the editorial office and the reviewers when you submit the revised manuscript. In addition to this list, please provide two versions of the revised manuscript; one where all the revisions/changes to the original text are visible/highlighted as “track changes” in the word document and one where all changes are accepted/included in the document.

**Reviewer 1**

The results do not answer the research question that is the effect of season, climate and diet on selenium and vitamin E in reindeer. With the used design it is impossible to separate these possible effects from each other.

We have changed the focus to “describe circulating Se and vitamin E concentrations in three reindeer herds that are located in two different states (temperate NY and subarctic AK) and have two different husbandry systems (captive and free-range); we show the descriptions separately for summer and winter.”

The composition of diet is unclear since diet and nutrient intake is unknown for the free-ranging reindeer and known only for part of the diet for the captive reindeer. The nutritional content of pasture/haylage is not presented, neither the proportions of pasture/haylage to milled ration in the total diet (and whether this differed between seasons).

There is currently no standardized commercial diet for reindeer in the US. I have noted in the text that we are unable to determine the amount of forage ingested. It is difficult to determine diet and uptake of the free-ranging herd in particular, and pasture availability was limited, particularly in the New York herd. As noted in the discussion, based on USGS reports on soil selenium in New York and Fairbanks, forage contributes minimally to the selenium content of the diet. Unfortunately, we do not have forage vitamin E concentrations, but the majority of vitamin E is lost in drying and storage, therefore winter forage and hay contribute minimal vitamin E to the diet, and the vitamin E concentration in silage is variable. Because of the difficulty determining quantity of forage ingested, and because the forage was expected to contribute only minimal selenium and limited vitamin E, only the concentrate rations were considered.

The reason why climate should affect Se and vit E through other mechanisms than diet is unclear. Furthermore, since the NY herd and the AK herd have different diets there is no possibility to reveal any effect of climate even if there would be one.

Reindeer decrease feed intake over winter, and the feed intake will affect the amount of selenium and vitamin E that the animals ingest. I have tried to clarify this in the text.

Other comments:

- The introduction is too long and contains information that is not relevant for the research question.

I have made the introduction more concise.

**Reviewer 2**

-The study is unique and original in a sense that there are not many (if any) existing literature about the circulating levels of vit. E and selenium in reindeer blood. There are some studies about the concentrations in reindeer liver and meat, but these naturally require collection from carcasses and not from live animals as was done in this study. The comparison with other deer species, from which blood levels have been previously reported is interesting.

We agree, and we did our best to find comparable species.

-The abstract and introduction are missing a clear justification stating why the study is important, why should the circulating vit. E and selenium concentrations in reindeer blood be studied? What are the potential health effects and practical implications of selenium or vitamin E deficiency or excess to reindeer, to the profitability of reindeer management and to the people eating reindeer meat?

I have added the statement “Proper nutrition is critical in livestock production” in the abstract and, in the interest of being concise, have included a reference on the importance of these nutrients to animal health within the introduction.

-The methodological part is well and clearly written and sufficient standards have been used in the analyses.

Thank you for your kind comment.

-The small sample size and the fact that the same animals were not necessarily retrieved for sampling between the different sampling occasions limits the statistical analysis and its power; however the authors have taken these limitations into account when possible.

It was challenging to get adequate samples.

-The units for blood selenium and vitamin E concentrations are not metric units now; they should be converted to µmol/L.

We apologize for this problem. In veterinary diagnostics in the United States, we customarily work in parts per million and micrograms per unit volume, which are much simpler to calculate, thus less prone to error, and more practical for veterinarians and livestock nutritionists to use. These are the units used in most of our references. While we understand the importance of using the proper units for this journal, our intention is that this information is clinically useful, therefore I have tried to use both types of units throughout the document. We hope that this meets your approval.

-The latin name of the species is not provided anywhere in the text or title.

Latin names have been added for the species mentioned.

-The biggest lack of the study is that there are no samples from the winter season from the free-ranging animals. Luckily this is mentioned and discussed in the text, but to justify the absence of winter samples for “practical reasons in arctic winter conditions” is not to my opinion sufficient, as it would be possible to obtain such winter samples if not in US at least in Scandinavia. For the current article, the author could make an additional effort to find previous articles where winter values have been analyzed in free-ranging reindeer in Scandinavia > if such studies are not available as I assume is the case (could not find such articles myself either), then a suggestion could be made in the manuscript to assess the concentrations over winter season in the forthcoming studies.

While we hope that this information can be collected in the future, the husbandry practices of the area of the free-ranging herd allow for the animals to roam quite far afield, making it difficult to sample them. Furthermore, the study was conducted during 2012-2013, temperatures were below -28oC, and the collection syringes and tubes would freeze before they could be used. I have tried to clarify this in the text.

The latin name of the species is not provided anywhere in the text.

This change has been accepted in the text.

The abstract would benefit from a short justification why the study was undertaken; why it’s important to learn about the changes in selenium and vitamin E concentrations of the reindeer?

I have added a paragraph explaining that proper nutrition is important for livestock production, but there are no dietary standards for this species in the US.

I suggest using “female reindeer” instead of “reindeer cow” here and elsewhere in the text.

This change has been accepted and applied throughout the document.

The unit used for vitamin E is not a metric unit (SI unit) as stated in the guidelines for Authors. Please convert all values to metric unit (µmol/l) here and elsewhere in the text and tables. The same for selenium. The unit used for vitamin E is not a metric unit (SI unit) as stated in the guidelines for Authors. Please convert all values to metric unit (µmol/l) here and elsewhere in the text and tables. The same for selenium.

I apologize for this problem. In veterinary diagnostics, we customarily work in parts per million and micrograms per unit volume, which are much simpler to calculate and more practical for veterinarians and livestock nutritionists to use, and these are the units used in most of our references. I understand the importance of using the proper units for this journal, but I also want this information to be of clinical use, therefore I have tried to use both types of units throughout the document. International Units are the customary unit for vitamin supplements, thus I have left these units intact for the time being.

Again here I think the references should be in chronological order. Please check from instructions and revise if needed.

Apologies. I’m having difficulty with a referencing software, but have made these changes by hand.

Again here I think the references should be in chronological order. Please check from instructions and revise if needed.

Apologies. I’m having difficulty with a referencing software, but have made these changes by hand.

To me the lack of the winter samples from the free-ranging reindeer is the biggest lack of this study. Even though the collection of blood samples is more difficult in winter compared to summer, I think it’s possible (I know this because I have done it at several occasions), if not in the US at least in Scandinavia, where the reindeer herds are to some point monitored over winter as well (even the free-ranging animals). Here, I suggest that the authors perhaps remove this statement, but instead indicate a need to collect and analyze winter samples in future studies.

As noted previously, free-range reindeer are customarily unsupervised in the area where this study took place. While we hope that this information can be collected in the future, the study was conducted during 2012-2013 and outdoors, temperatures were below -28oC, and the collection syringes and tubes would freeze before they could be used. I have tried to clarify this in the text.

Please use the metric unit (mmol/L) here and elsewhere in the article, as instructed in the guidelines for authors.

Are these the min and max concentrations? Please clarify here and in the table title.

I apologize for this problem. In veterinary diagnostics, we customarily work in parts per million and micrograms per unit volume, which are much simpler to calculate, thus minimizing error, and more practical for veterinarians and livestock nutritionists to use, and these are the units used in most of our references. I understand the importance of using the proper units for this journal, but I also want this information to be of clinical use, therefore I have tried to use both types of units throughout the document.

Consider using “free-ranging” here and elsewhere instead of “free range”.

I have accepted this change where it occurred.

I don’t think there should be a comma separating the journal name and the volume number. Please check and revise accordingly.

Apologies. I had some difficulty with the referencing software and have retyped the references by hand and tried to include all of the suggestions that you list below.

General: 1) I found inconsistent capitalization of the journal titles. 2) Is the intended journal truly one which does not abbreviate titles of journals of cited articles?

I had some difficulty with the referencing software, but have made these corrections by hand. Hopefully I found all of the errors.

Aastrup et al.: Why isn’t the taxonomic name italicized? (THIS IS A REPEATED ISSUE; I do not believe that every cited journal failed to italicize.) Why does a later one repeat “tarantus” but not this one? (We must do as the journal in which it was published did, I agree.)

Taxonomic names have been italicized. I think the subspecies was omitted here because the reference deals with both reindeer and caribou.

Miller et al.: Shouldn’t *Rangifer* be capitalized? Are we sure that the journal didn’t have the taxonomic names italicized?

Corrected.

Finstad; Hassan et al.; Roug et al.; anywhere else it appears: Are we sure the journal didn’t italicize the taxonomic name?

These are corrected.

Italicize the muscle in Sampels et al.?

Done

Stephenson et al.: Lots missing after *Alces*.

This is complete.

Hess et al.: Must we include the title in all three languages?

This is rewritten.

Does van Apeldoorn really alphabetize as an “A”?

This is no longer present.

Anon: I bet we get asked for page numbers.

I have rewritten this reference.

Furberg et al.: Need page numbers

It’s an internet journal and the only page number listed is 8471. The printed copy I have starts at page 1.

Hassan 2012a: Fix page numbers; I suspect we are missing the dash & first numeral for the final page…

It’s an internet journal and the only page number listed is 17997. The printed copy I have starts at page 1.

Nieminen & Heiskari needs a 2nd page number—or was this only an abstract? Are abstracts worthy of citing?

Fixed.

Roug et al. Needs volume & pages

This is no longer present.