

TAKLIMAT PENYEDIAAN LAPORAN AKHIR KUE 309 (2010/11)



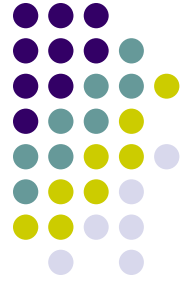
10 Jan 2011
PROF NORITA MOHAMED

OUTLINE



- General issues
- Preparation of final report
- Oral presentation

Log Book & Final Report



- Log book
 - Compulsory for all students
 - Must be hardcover
 - Write down date you do the experiment
 - Where appropriate write, the aim/objective of the session,
 - e.g., Preparation of stock solutions
 - Preparation of mobile phase
 - Will be signed by supervisor every fortnight
 - Do not tip-ex. If corrections need to be made, slash, write on top, and signed.
- Final report
 - Must comply to requirements of Journal of Physical Science
 - Maximum pages of text: 20

KUE 309: Important dates



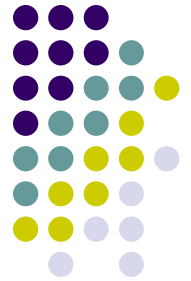
- **10 Jan 2011**
Briefing on writing of final report
- **14 Mar 2011**
Hand in soft copy of abstract (English) and a hard copy to Cik Hawa both of which has been edited by your supervisor (please have your supervisor sign the hard copy)

KUE 309: Important Deadlines



- **21 Mac 2011**
Tarikh Akhir penyerahan **2 salinan Laporan Pertama Projek** oleh pelajar ke Pejabat Am (*pemarkahan akan diberi*).
- **23 Mac 2011**
Pengambilan Laporan Projek (drp. Cik Hawa) dan penyerahannya kepada Penyelia dan Pemeriksa Kedua oleh **Pengurus Pengajian Program Sains Tulen dan Sains Gunaan**.
- **10 April 2011**
Penyerahan markah Laporan Projek oleh semua Pemeriksa kepada **Pengurus Pengajian Program Sains Tulen dan Sains Gunaan** dan penyerahan Laporan Projek yang telah dibetulkan oleh Pemeriksa Kedua kepada Penyelia masing-masing.
- **18 April 2011**
Pengambilan kembali **Laporan Pertama Projek (2 naskah)** oleh pelajar daripada Penyelia atau di Pejabat Am, P.P. Sains Kimia dan membuat pembetulan yang diperlukan.

KUE 309: Important Deadlines



- **9 -10 Mei 2011**
Seminar Projek Tahun Akhir
Kehadiran semua pelajar untuk sesi seminar adalah **DIWAJIBKAN** dan kedatangan akan diambil.
- **10 Mei 2011**
Markah seminar diserahkan kepada **Pengurus Pengajian Program Sains Tulen dan Sains Gunaan**.
- **12 Mei 2011**
2 naskah laporan projek yang telah dibetulkan dan disahkan oleh Penyelia, bersama Borang Pengesahan Penghantaran/Penerimaan Laporan KUE 309, diserahkan kepada Cik Siti Hawa, oleh pelajar (**Pelajar akan diberi gred “F” jika gagal menyerahkan laporan**).
- **13 Mei 2011**
Penyerahan semua **markah akhir** oleh **Pengurus Pengajian Program Sains Tulen dan Sains Gunaan** kepada Timbalan Dekan, Pengajian Siswazah dan Penyelidikan.

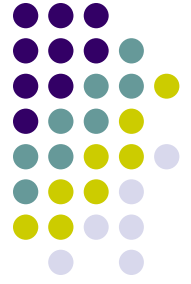
Final Report Guidelines

<http://chem.usm.my/>



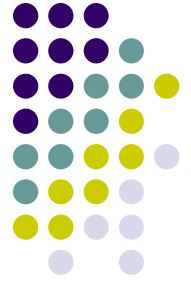
- Final reports according to format of **Journal of Physical Science (USM journal)**.
- Either in English or Bahasa Malaysia and should be typed on one side of A4 paper
- doubled-spacing, including the reference section, with a 4-cm margin on all-sides.
- title, abstract, text, references, figures and tables.
- title and abstract should be combined on one page.

Final Report Guidelines



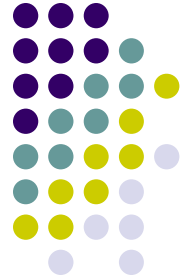
- Abstract of not more than 100 words in both English and Bahasa Malaysia.
- **Avoid abbreviations, diagrams, and reference to the text.** Six keywords to be placed after the abstract.
- References should be cited in the text by an Arabic numeral in brackets. References should be listed in numerical order.

Final Report Guidelines



- Tables and figures as separate sheet of files with clearly labeled captions, legends, keys and footnotes, if any. Each table should be typed on a separate sheet of paper. Tables should be numbered consecutively in Arabic numerals.
- Figures should be numbered consecutively in Arabic numerals. Please submit one figure per page.
- **The maximum number of pages of the text is 20.**

Example of front cover



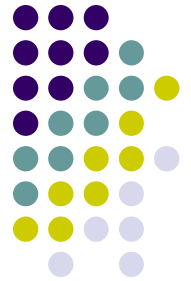
DETERMINATION OF
by
NORITA MOHAMED

**Final report submitted in partial fulfillment of the
requirements for KUE 309 – Final Year Project**

Supervisor: Dr

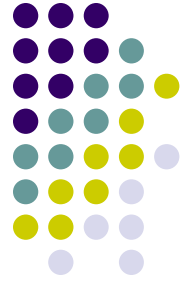
**School of Chemical Sciences
Universiti Sains Malaysia
March 2011**

ORGANISING YOUR WORK



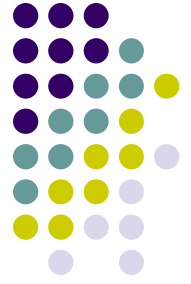
- Photocopy relevant papers, make notes on them.
- Write full details of your work – never trust your memory!
- Construct figures, graphs and tables as soon as the data are available.

Organization ...



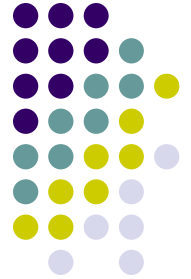
- Start writing while work is still in progress
- A common order of writing:
 - Introduction
 - Experimental – equipment used, model, etc.
 - Results - Tables & Figures
 - Discussion
 - Conclusion
 - Abstract, title – the last

PLANNING STAGE



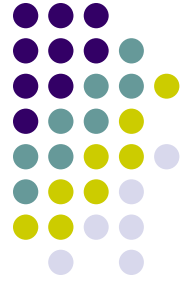
- Understand thoroughly the background of your project.
- Read thoroughly key research papers
- Acquire all relevant journals/books
- Identify all major journals in the area
 - E.g., Analytical method development
 - Analytical Chem
 - Analyst
 - Analytica Chimica Acta
 - Talanta

WRITE WITH:



- PRECISION
- CLARITY
- ECONOMY

UNNECESSARY WORDS OR PHRASES



- Has the capability of – can
- Have an impact on – affect, influence
- Make use of – use
- It would appear that - apparently
- As a consequence of – because
- Due to the fact that – because
- For the purpose of – to
- For the salted eggs, the extraction was done with different extraction steps, where 10 g sample ... - For the salted eggs, 10 g sample

TITLE



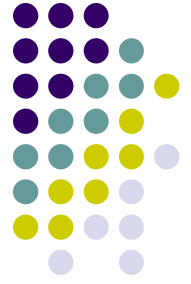
- Must accurately reflect the work
Coin catchy terms, expressions
e.g. Novel, micro-technique, nano
materials, if possible

ABSTRACT



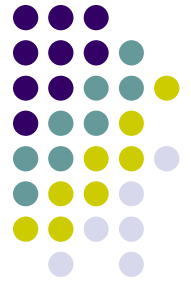
- Report concisely the purpose and outcome of the work.
- Summarise the key findings
- Often the last portion to be written

INTRODUCTION



- Provide overview, state of the art, major advancements in the field
- Offer comments of earlier work
- Provide clear statement of the problem, why are you studying it?
- To what extent is your work “original” or different from previous work?

EXPERIMENTAL



- Is enough information being provided so that the work can be repeated?
- Avoid use of first person – e.g., I/we undertook this study
- Do not give instructions, but rather describe what you have done

EXPERIMENTAL



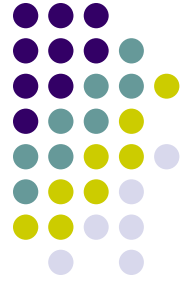
Weigh 2.36 g of reagent A.....

Pipette 5.0 mL solution, transfer to reaction vessel....

2.3 g of reagent A was weighed

5.0 mL of solution was pipetted, and was transferred to a reaction vessel...

RESULTS / DATA PRESENTATION



- Summarise data collected. Avoid redundancy
- Can you combine figures?
- Provide representative chromatograms, spectra, recordings.

RESULTS / DATA PRESENTATION



- Pay attention to significant figures
- Perform statistical analysis when necessary
- Tables and Figures should be stand-alone, not necessary to read the text.



Table 2. Level of fungicides found in apples ($n=3$) using the proposed HPLC method

Samples no.	Variety	Country of origin	Concentration, ppm.		
			CHP	DPA	DP
1	Cherry Smith	New Zealand	0.02	0.24	0.55
2	Brashara	New Zealand	0.01	0.03	0.45
3	Pacific Rose	New Zealand	0.02	0.01	0.57
4	Hi Early	Australia	0.01	0.004	0.02
5	Red Delicious	Australia	0.02	N.D.	0.45
6	Red Delicious	South Africa	N.D.	0.004	0.16
7	Cherry Smith	South Africa	N.D.	0.43	0.71
8	Golden Delicious	America	0.003	0.08	0.49
9	Red Delicious	America	0.01	1.46	0.68
10	Sun Moon	China	N.D.	0.03	0.31
Maximum legal limits			25	5	—

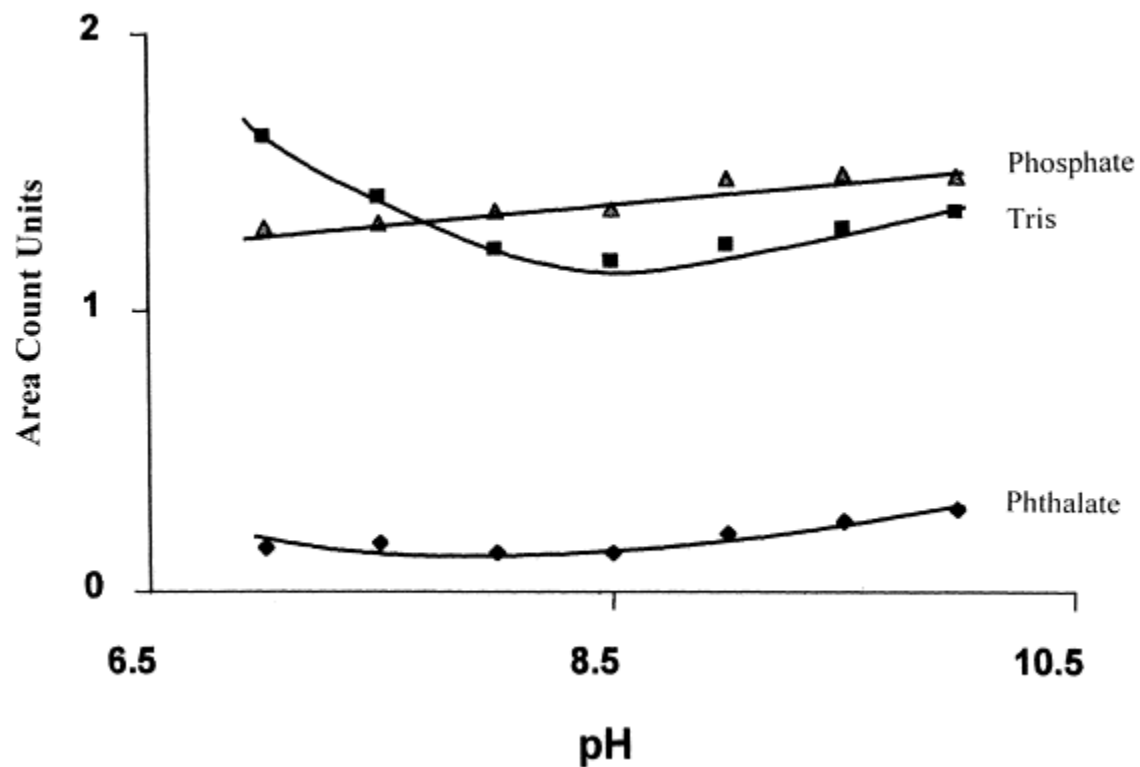


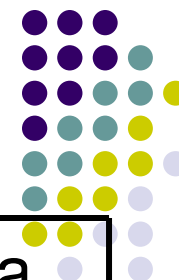
Fig. 3. The effect of type of buffer and its pH on the peak area of $10 \mu\text{g ml}^{-1}$ oxolinic acid. Conditions: buffer concentration, 5 mM; applied voltage, 20 kV; injection time, 30 s.

Tables & Figures



- Caption/title for tables must be **above** the Table.
- Caption/title for figures must be **below** the Figure.

Comment on this table

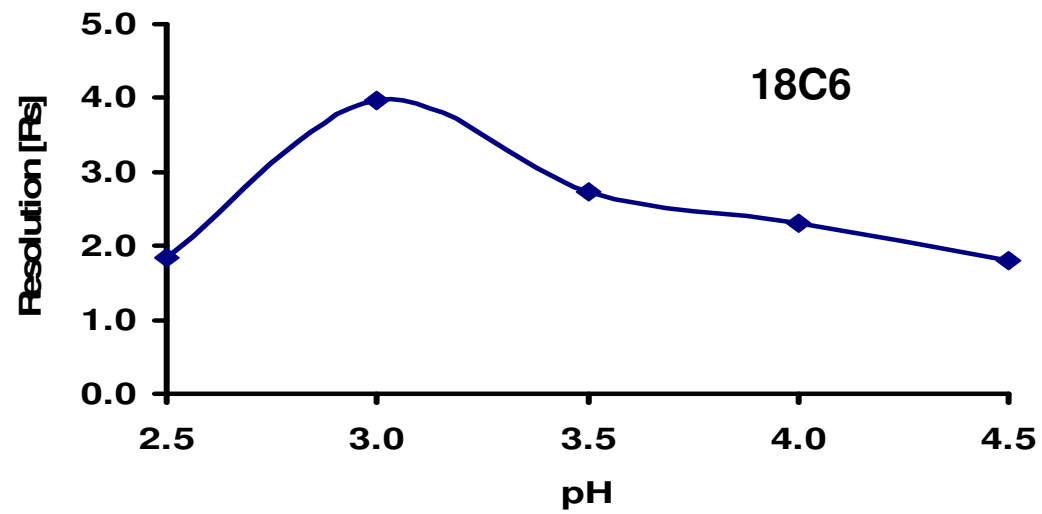
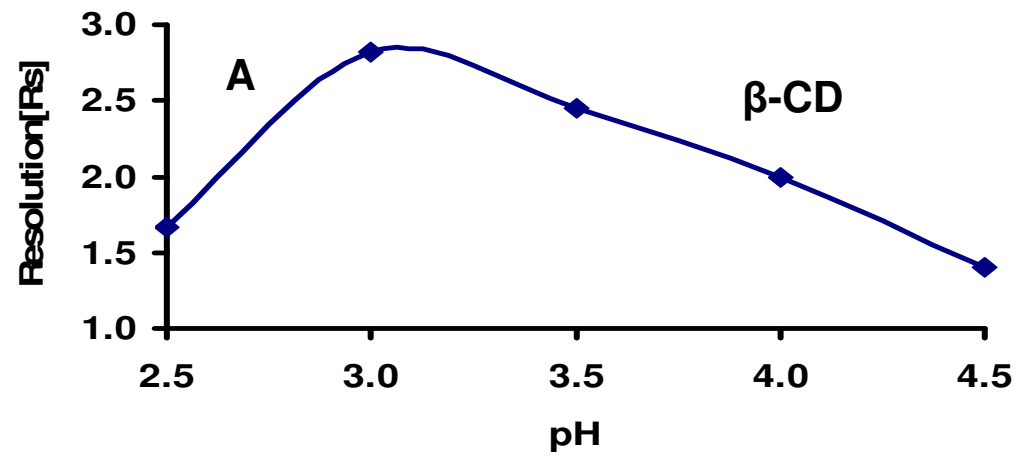


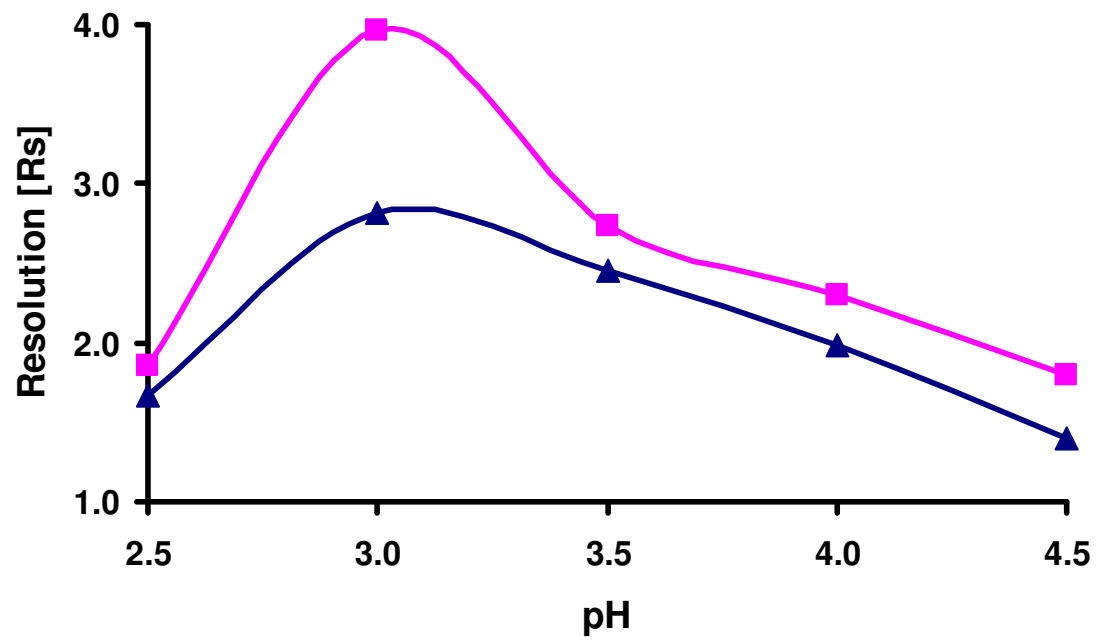
Concentration, %	Peak Area		Peak Area Ratio, Analyte/Inte rnal Std.
	Analyte	Internal Std	
1	39.446	20.25	1.9484317
2	85.642	20.089	4.2631290
3	100.57	19.834	5.0704346
4	108.118	14.89	7.2611148

Table 1. GC Analysis Using Internal Standard

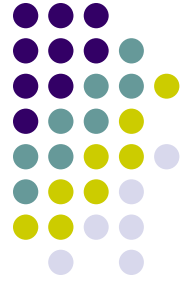
Comment on this Figure





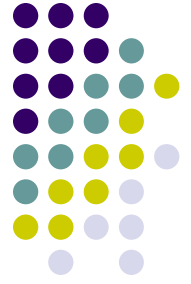


DISCUSSION



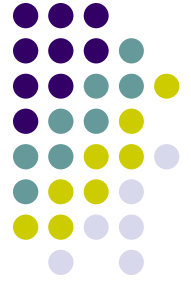
- Avoid statements e.g., “Results are shown in Table/Figure 1”., -with no comments.
- Highlight important features and limitations of the work
- Interpret and compare results

CONCLUSIONS



- Highlight the contributions of your work
- Offer its limitations

REFERENCES



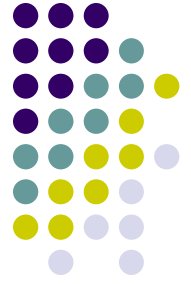
- Be consistent throughout.
- Proofread these too.

REFERENCES



- Book
Ngah, W.S.W. (2005) *Analytical Chemistry*, Kuala Lumpur, McGraw Hill, pg. 10-15.
- Website
Include date accessed
- Journal article
Saad, B. (2006), Determination of peroxide value in vegetable oils , *Anal. Chim. Acta*, 505, 35-42.

There are at least 6 cases of inconsistencies, can you spot them?



- [1] R.A. Wheatley, Trends in Anal. Chem., 19 (2000) 617
- [2] S. Naz, S., Sheikh, H., Siddiqi, R., Sayeed, S.A., *Food Chem.*, 2004, 88 (2) 253-258.
- [3] H. B. W. Patterson, Handling and storage of oilseeds, oils, fats and meal, Elsevier Science, New York, 1989.
- [4] M.V. Aardt, S.E. Duncan, T.E. Long, S.F. O'Keefe, J.E. Marcy and S.R. Sims, "Determination of anisidine value using FTIR Method", *J. Agric. Food Chem.* 52 (2004) 587-593.
- [5] E. P. Labrinea, N. S. Thomaidis and C. A. Giorgiou, "Rapid methods for the assessment of oil quality", *Anal. Chim. Acta* 448 (2001) 201.



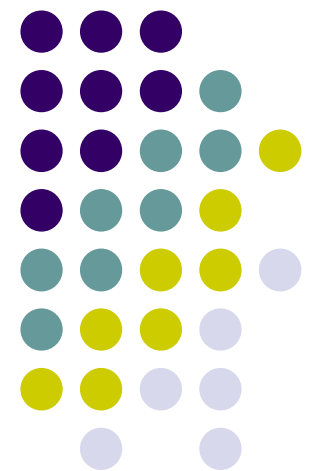
- [1] R.A. Wheatley, Trends in Anal. Chem., 19 (2000) 617.
- [2] S. Naz, H. Sheikh, R. Siddiqi, S.A. Sayeed, Food Chem., 88 (2004) 253.
- [3] H. B. W. Patterson, Handling and storage of oilseeds, oils, fats and meal, Elsevier Science, New York, 1989.
- [4] M.V. Aardt, S.E. Duncan, T.E. Long, S.F. O'Keefe, J.E. Marcy and S.R. Sims, J. Agric. Food Chem., 52 (2004) 587.
- [5] E. P. Labrinea, N. S. Thomaidis and C. A. Giorgiou, Anal. Chim. Acta, 448 (2001) 201.

APPENDICES

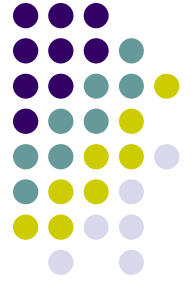


- Frequently not read by examiners.
- Contain supplementary materials, e.g., raw data of the experiment, examples of calculations, calibration curves,

ORAL PRESENTATION

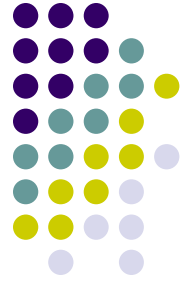


ORAL PRESENTATION




- Usually short - 15 min 5 min QA session.
- Stress only key points.
- Limit ~ 1 minute per slide

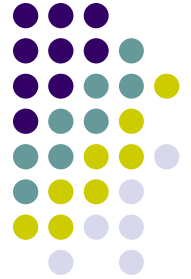
Preparation of Slides



- Try to limit one point per slide
- Use large type size – no more than 6-9 lines
- Good contrast of background from text
- Keep it simple – do not get fancy

- 
- Several alternative methods for the determination of the oxidative stability of edible oils and fats have been reported. Fourier-transform infrared (FTIR) methods need the manipulation of signals using partial least square regression techniques [13-16], and are not accurate for samples with AV values higher than 17 [6] while near-infrared spectroscopy NIR is found to be inaccurate for PV and AV measurements [17]. Head-space gas chromatography (GC) with flame ionization detection [18] has been applied for the analyses of volatile aldehydes in fish oil while the application of GC-mass spectrometry (MS) with [19] or without derivatization [20-22] has been described. High performance liquid chromatographic (HPLC) methods are also suitable for determining secondary oxidation products [23,24].
 - The electronic nose based on the non-selective multi-array sensing of volatiles, has been attempted in which principal component analysis was used for data manipulation [25,26]. Thermal methods such as thermogravimetric analysis is obtained by measuring the percent weight gain due to oxidation [5] while differential scanning calorimetry [27,28] determines the enthalpy changes due to oxidation and thermal-oxidative decomposition of oils and fats. The concentration of radicals as measured by electron-spin resonance (ESR) spectrometric technique can be correlated with secondary oxidation processes and can thus be used for assessing the oxidative status of cheese [29].

PRESENTATION: DO LIST



- Use the microphone
- Face the audience
- Relax
- Speak slowly and clearly
- Maintain eye contact with the audience

PRESENTATION: DO NOT DO LIST



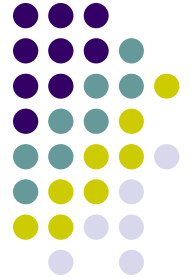
- Do not read the text – use slides as your guide. Say in another way.
- Do not recite presentation from memory.
- Do not provide a chronology of your studies
- Skip the unimportant ones when time is running short. Go through quickly if it had been presented by an earlier speaker

CONCLUSIONS



- Can be included with results or in discussion section

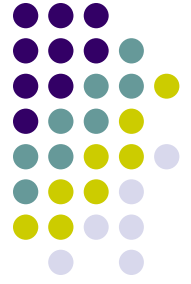
REFERENCES



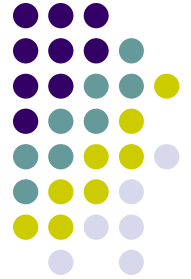
Many styles.

- Use format as required by journals.
- Proof read these too.

ACKNOWLEDGEMENTS



- Acknowledge grant support
- Who else helped out?



**THANK YOU FOR YOUR
ATTENTION**