

## Referências Bibliográficas

- 1 ALMEIDA, V. L. de et al. **Quím. Nova.** 28, p. 118-129, 1994.
- 2 REEDIJK, J. **Chem. Rev.** 99, p. 2499-2510, 1999.
- 3 PETROVIC, D. et al. **Bioorg. Med. Chem.** 15, p-4203-4211, 2007.
- 4 FONTES, A. P. S.; ALMEIDA, S. G. de. **Quím. Nova.** 20, p. 398-406, 1997.
- 5 KEPPLER, B. K. **New J. Chem.** 14, p.389-403,1990.
- 6 MUNRO, R.;CAPELL,H.A. **British Journal of Rheumatology.** 36, p. 104-109, 1997.
- 7 SARKAR, B. **Chem. Rev.** 99, p. 2535-2544, 1999.
- 8 SIGEL, A.; SIGEL. H. (Ed.). **Metal ions in biological systems.** Fontis Media, New York, 2004.
- 9 BERTINI,I. et al. **Biological Inorganic Chemistry-Structure & Reactivity.** University Science Book, California, 2007.
- 10 HO, Yee-Ping et al. **Medicinal Research Reviews,** 23, p. 633-655, 2003.
- 11 PRIZE, C. F. K. **Cancer,** 15, p.2303-2316, 1985.
- 12 <<http://www.chemcases.com/cisplat/cisplat01.htm>> Acesso em: 11 abr. 2010
- 13 HAMBLEY, T.W. **J.Chem.Soc.,** p.2711-2718, 2001.
- 14 SORENSON,C. M.; EASTMAN, A.; **Cancer Research,** 48, p. 4484-4448, 1988.
- 15 ROSA, D. O. da **Estudo de 6-aminopurinas e seus complexos de platina (II) como potenciais leishmanicidas.** Rio de Janeiro, 2007. 127f. Tese. (Doutorado em Química) – Departamento de Química, PUC-Rio.
- 16 Aronson, J. K. **Meylers Side Effects of Drugs: The International Encyclopedia of Adverse Drug Reactions and Interactions – Penicillamine.** Elsevier Science, 2006.
- 17 SULIMAN, F. E. et al. **J. Fluoresc.,** 18, p. 1131-1138, 2008.
- 18 CHONG, C. R.; AULD, D. S. **Biochemistry,** 39, p. 7580-7588, 2000.
- 19 BIERI, M.; Bürgi, T. **Langmuir,** 22, p. 8379-8386, 2006.

- 20 SIES, H. **Free Radical Biology & Medicine.** 27, p. 916-921, 1999.
- 21 BAINS, J. S.; SHAW, C. A. **Brain Research Reviews.** 25, 335-358, 1997.
- 22 METZLER, D. E. **Biochemistry.** Harcourt Academic Press, San Diego, 2001.
- 23 POMPELLA, A. et al. **Biochemical Pharmacology.** 66, p. 1499-1503, 2003.
- 24 HAYES,J.D.;McLELLAN,L. **Free Radic Res.** 31,273-300,1999.
- 25 JANSEN,B.A.J. et al. **Journal of Inorganic Biochemistry.** 89, p.197-202,2002.
- 26 ISHIKAWA,T.;ALI-OSMAN,F. **The Journal of Biological Chemistry.**p. 20116-20125, 1993.
- 27 KRÖNING,R. et al. **Cancer Chemother Pharmacol.** 45,p.43-49,2000.
- 28 VOLCKOVA,E. et al. **Pharmaceutical Research.** 19,p.124-13,2002.
- 29 ALXÉEV,V. **Análise Quantitativa.** Lopes da Silva, Porto, 1983.
- 30 BELLAMY, L.J. **The Infrared Spectra of Complex Molecules.** Jonh Wiley & Sons, New York, 1966.
- 31 LIN-VIEN, D. et al. **The Handbook of Infrared and Raman Characteristic Frequencies Of Organic Molecules.** Academic Press, New York, 1991.
- 32 SILVERSTEIN, R.M. **Identificação Espectrométrica de Compostos Orgânicos.** LTC, Rio de Janeiro, 2006.
- 33 HUHEEY,J.E. **Inorganic Chemistry: Principles of Structure and Reactivity,** Harper Collins, New York 1993.
- 34 NAKAMOTO, K. **Infrared and Raman Spectra of Inorganic and Coordination Compounds.Part B.** Jonh Wiley & Sons, New York, 1997.
- 35 RAMOS, J.M.T.A. **Estudo estrutural e espectroscópico vibracional de complexos bioinorgânicos metal-aminoácidos, com os metais Zn, Cd e Ni.** Rio de Janeiro, 2009. Tese. (Doutorado em Química) – Departamento de Química, PUC-Rio.
- 36 M.J. Frisch, G.W. Trucks, H.B. Schlegel, G.E. Scuseria, M.A. Robb, J.R. Cheeseman, V.G. Zakrzewski, J.A. Montgomery Jr., R.E. Stratmann, J.C. Burant, S. Dapprich, J.M. Millam, A.D. Daniels, K.N. Kudin, M.C. Strain, O. Farkas, J. Tomasi, V. Barone, M. Cossi, R. Cammi, B.

Mennucci, C. Pomelli, C. Adamo, S. Clifford, J. Ochterski, G.A. Petersson, P.Y. Ayala, Q. Cui, K. Morokuma, D.K. Malick, A.D. Rabuck, K. Raghavachari, J.B. Foresman, J. Cioslowski, J.V. Ortiz, A.G. Baboul, B.B. Stepanov, G. Liu, A. Liashenko, P. Piskorz, I. Komaroni, R. Gompertz, R.L. Martins, D.J. Fox, T. Keith, M.A. Al-Laham, C.Y. Peng, A. Nanayakkara, C. Gonzalez, M. Challacombe, P.M.W. Gill, B. Johnson, W. Chen, M.W. Wong, J.L. Andres, C. Gonzalez, M. Head-Gordon, E.S. Replogle, J.A. Pople, Gaussian 98, Revision A, 7, Gaussian, Pittsburg, PA, 1998.

37 <<http://cccbdb.nist.gov/>> Acesso em: 21 out. 2009

38 DYALL, K.G. **Theor. Chem. Acc.** 112, p. 403-409, 2004.

39 DAVIDSON, E.R.; FELLER,D. **Chem.Rev.** 86, 681-696, 1986.

40 YOUNG, D.C. **Computational Chemistry**. Jonh Wiley & Sons, New York, 2001.

41 METZ, B.et al. **Theor. Chem. Acc.** 104, p. 22, 2000.

42 COTTON, F.A.; WILKINSON,G. **Advanced Inorganic Chemistry**. Jonh Wiley & Sons, New York, 1980.

43 YANG, G. et al. **Spectrochimica Acta Part A**. 60, p. 3187-3195, 2004.

44 CABRAL, O.V. et al. **Spectrochimica Acta Part A**. 61, p. 337-345, 2005.

## 8 Anexos

### 8.1. Curvas de análise termogravimétrica

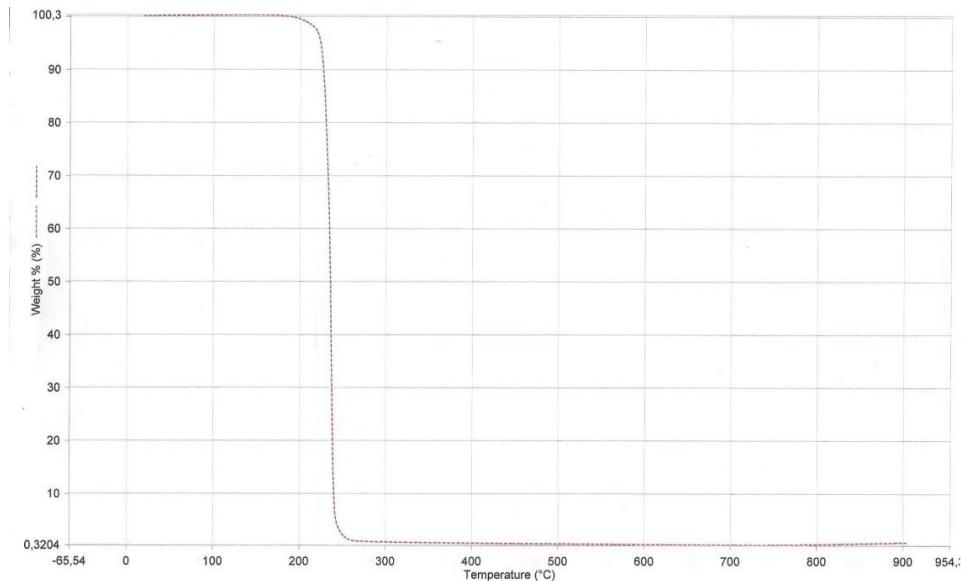


Figura 15: Curva termogravimétrica para a penicilamina

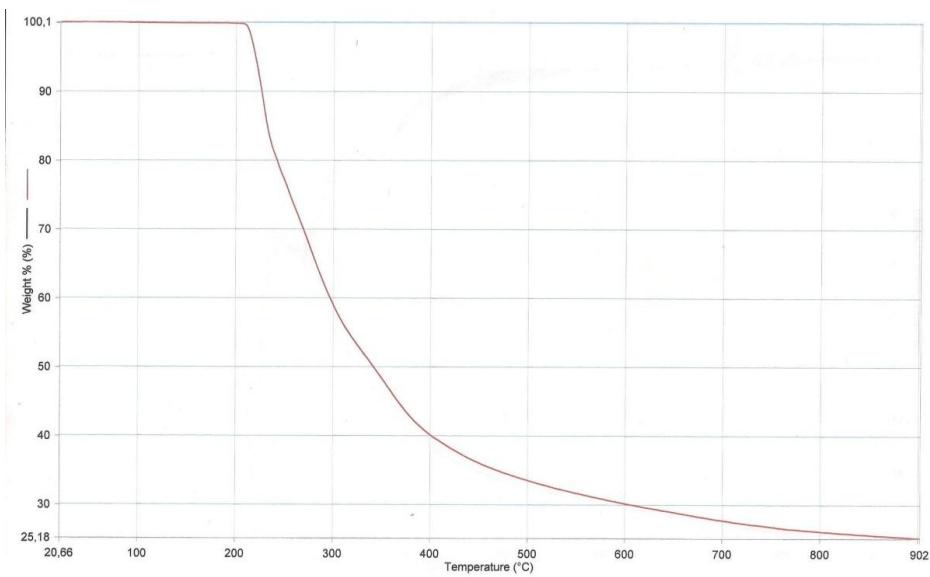


Figura 16: Curva termogravimétrica para a glutationa

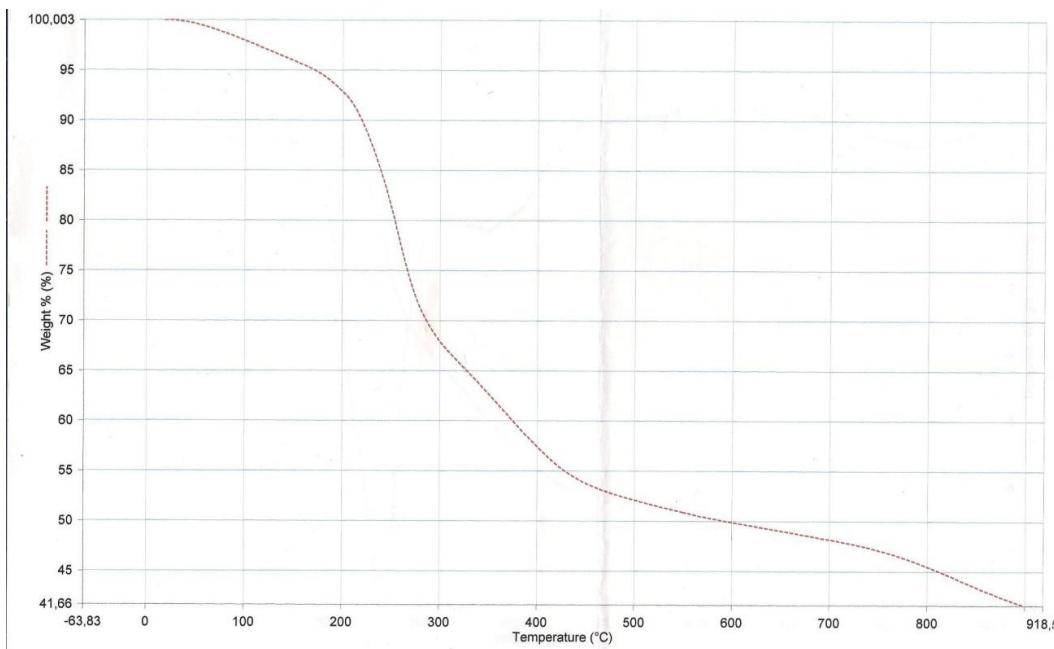


Figura 17: Curva termogravimétrica para o composto de cisplatina e glutationa

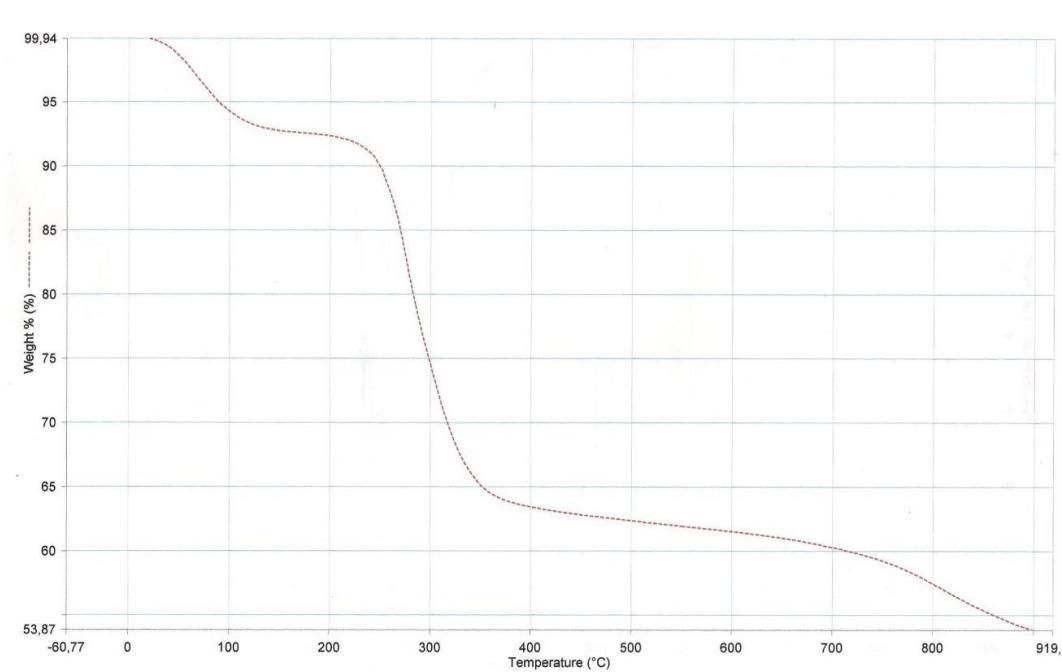


Figura 18: Curva termogravimétrica para o composto de cisplatina e penicilamina

## 8.2. Espectros de infravermelho

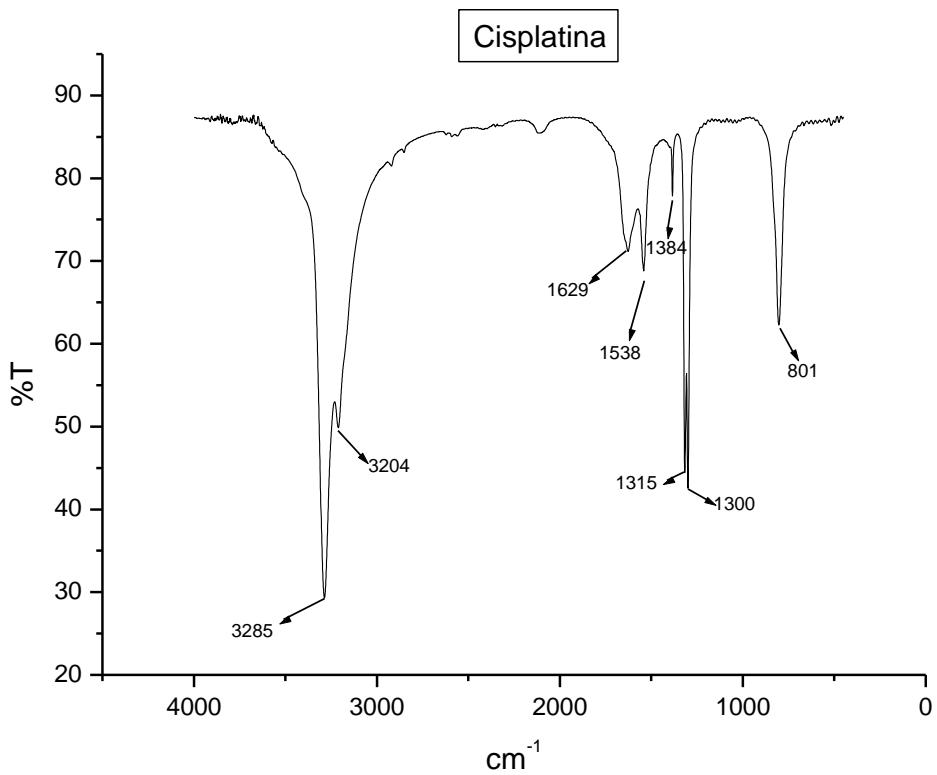


Figura 19: Espectro de infravermelho para a cisplatina obtido com pastilha de KBr

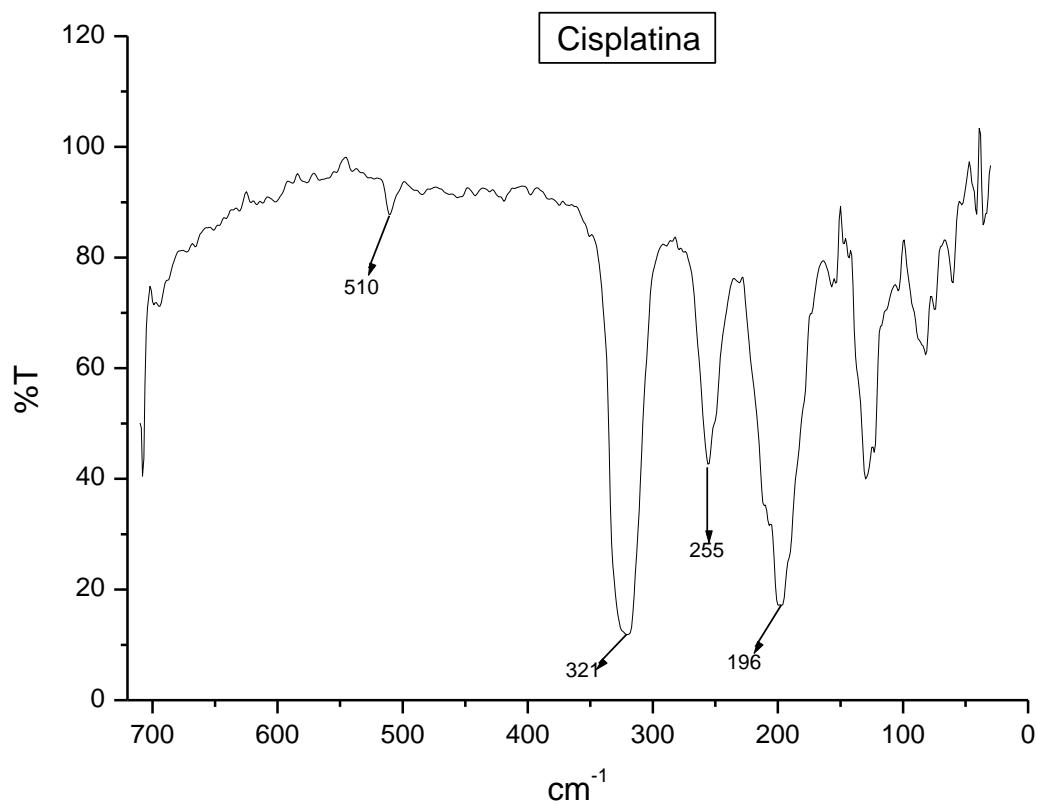


Figura 20: Espectro de infravermelho para a cisplatina obtido com pastilha de polietileno

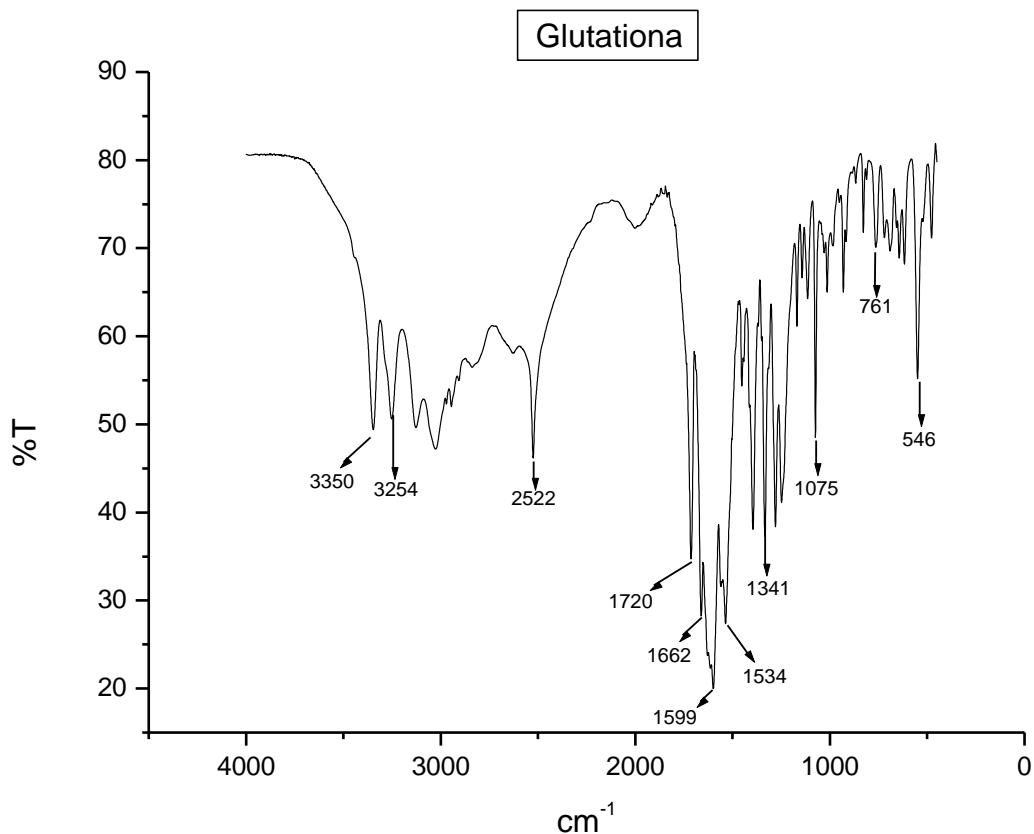


Figura 21: Espectro de infravermelho para a glutationa obtido com pastilha de KBr

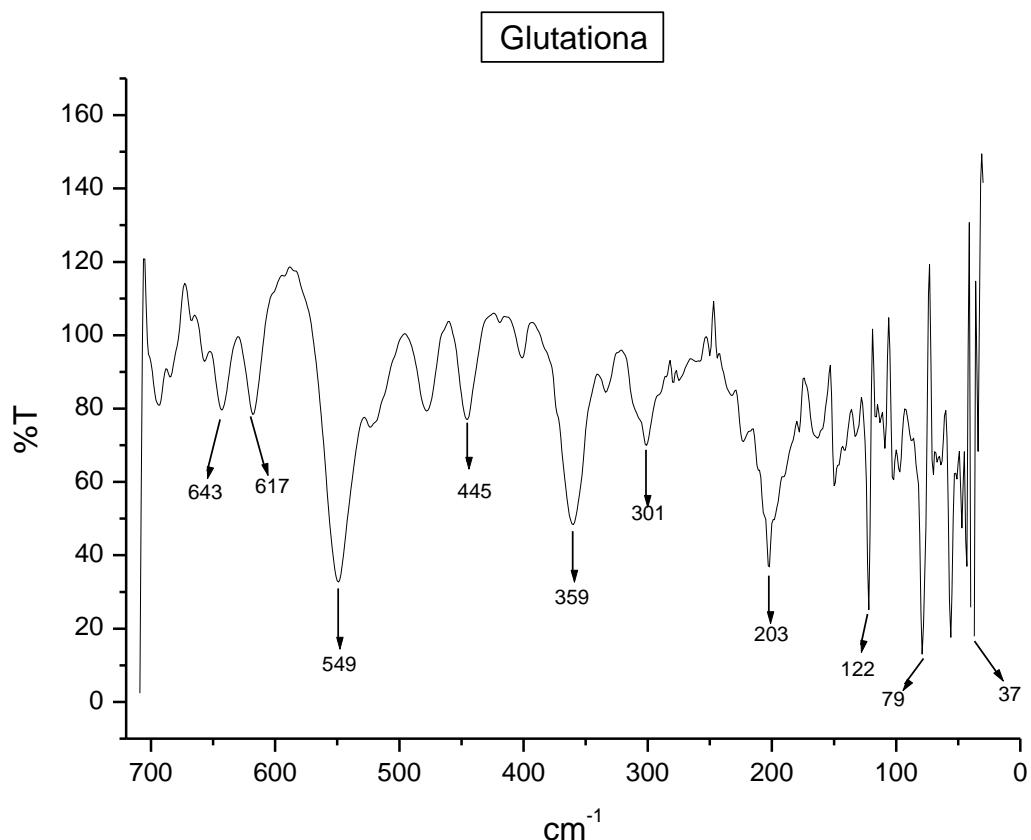


Figura 22: Espectro de infravermelho para a glutationa obtido com pastilha de polietileno

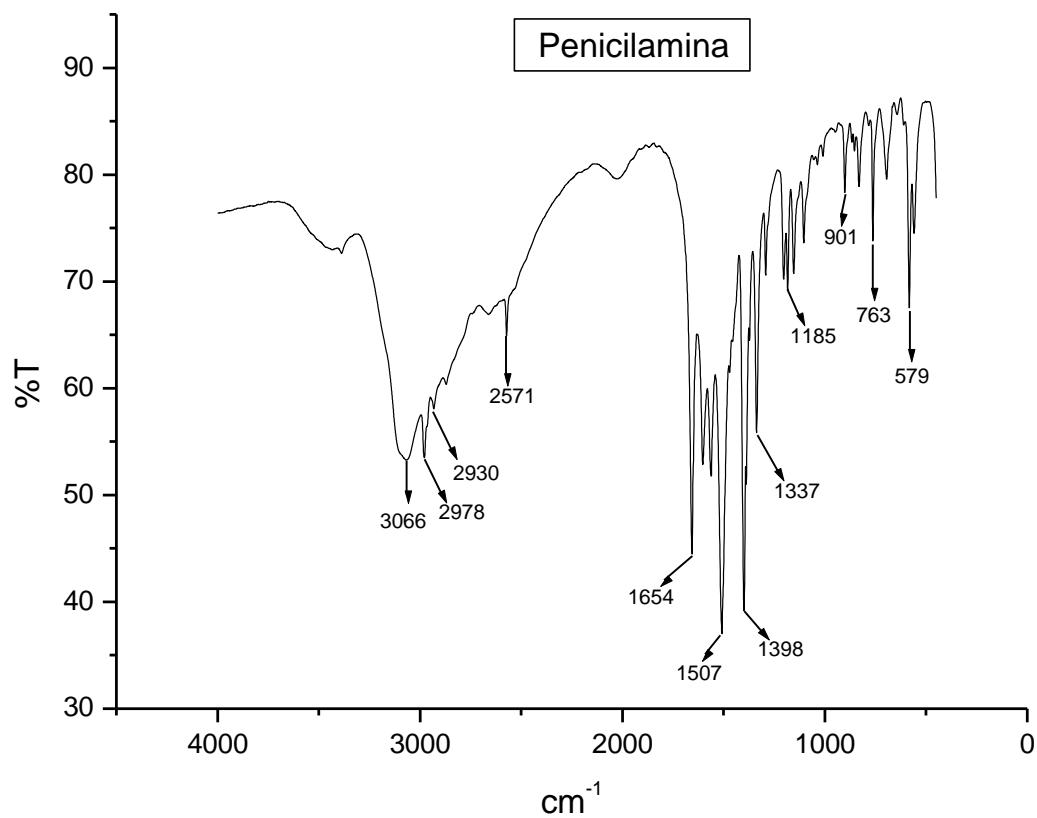


Figura 23: Espectro de infravermelho para a penicilamina obtido com pastilha de KBr

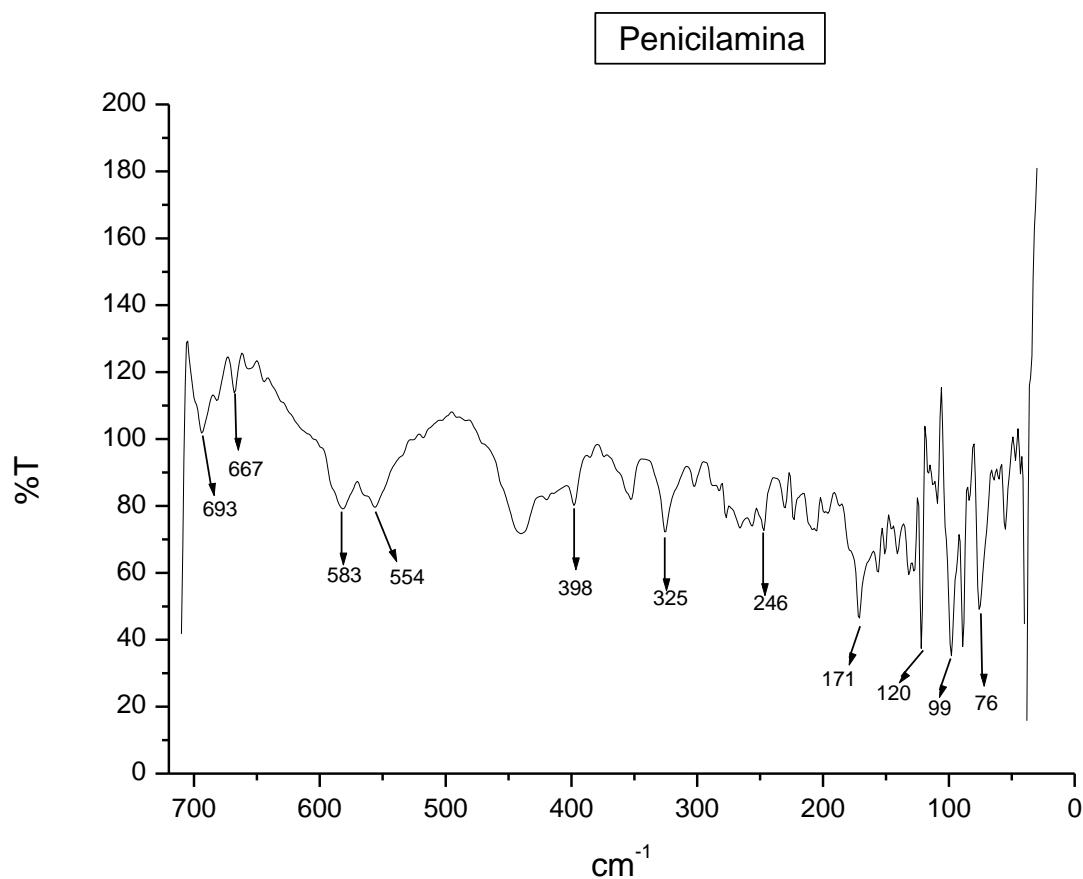


Figura 24: Espectro de infravermelho para a penicilamina obtido com pastilha de polietileno

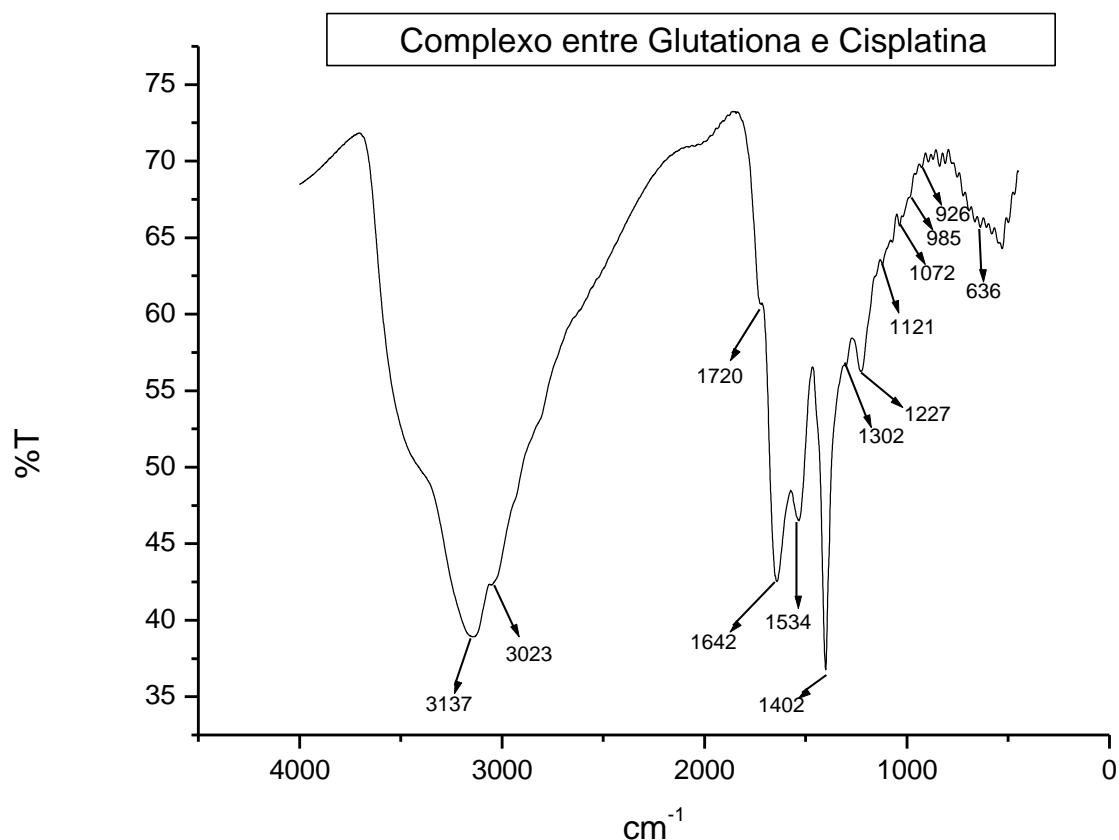


Figura 25: Espectro de infravermelho para o composto de cisplatina e glutationa obtido com pastilha de KBr

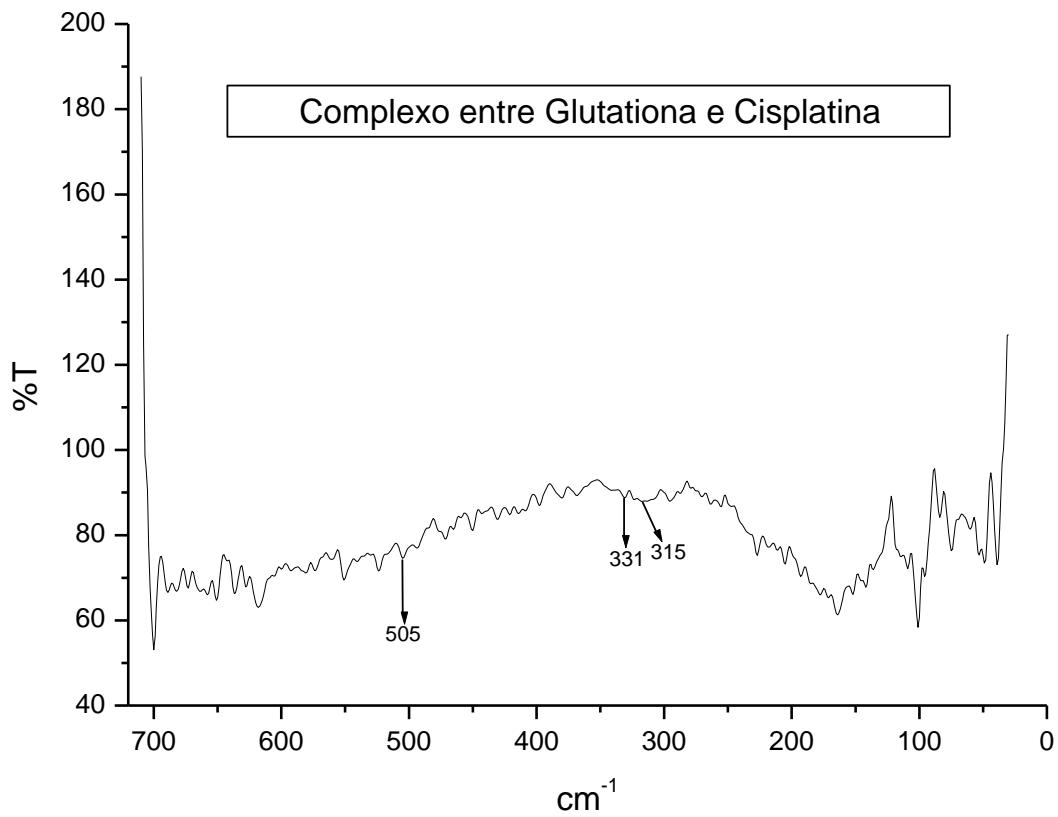


Figura 26: Espectro de infravermelho para o composto de cisplatina e glutationa obtido com pastilha de polietileno

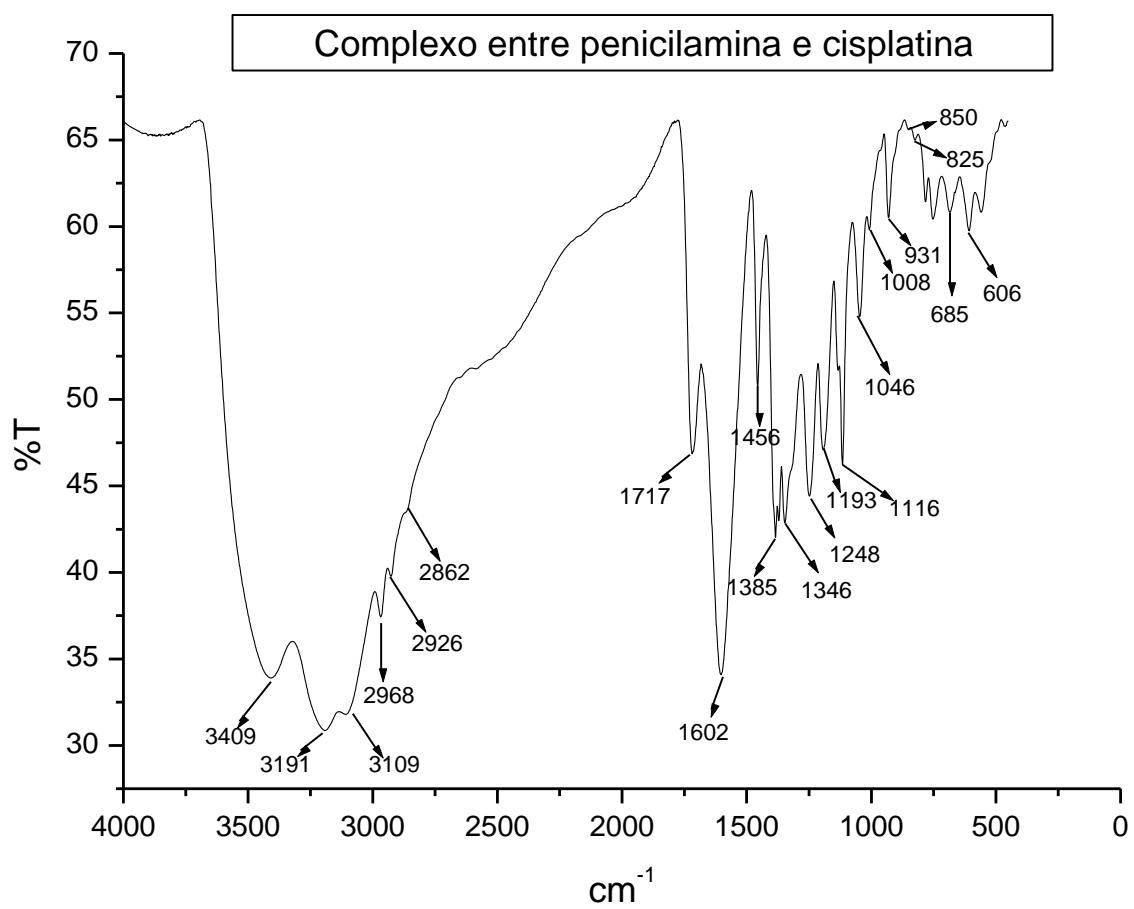


Figura 27: Espectro de infravermelho para o composto de cisplatina e penicilamina obtido com pastilha de KBr

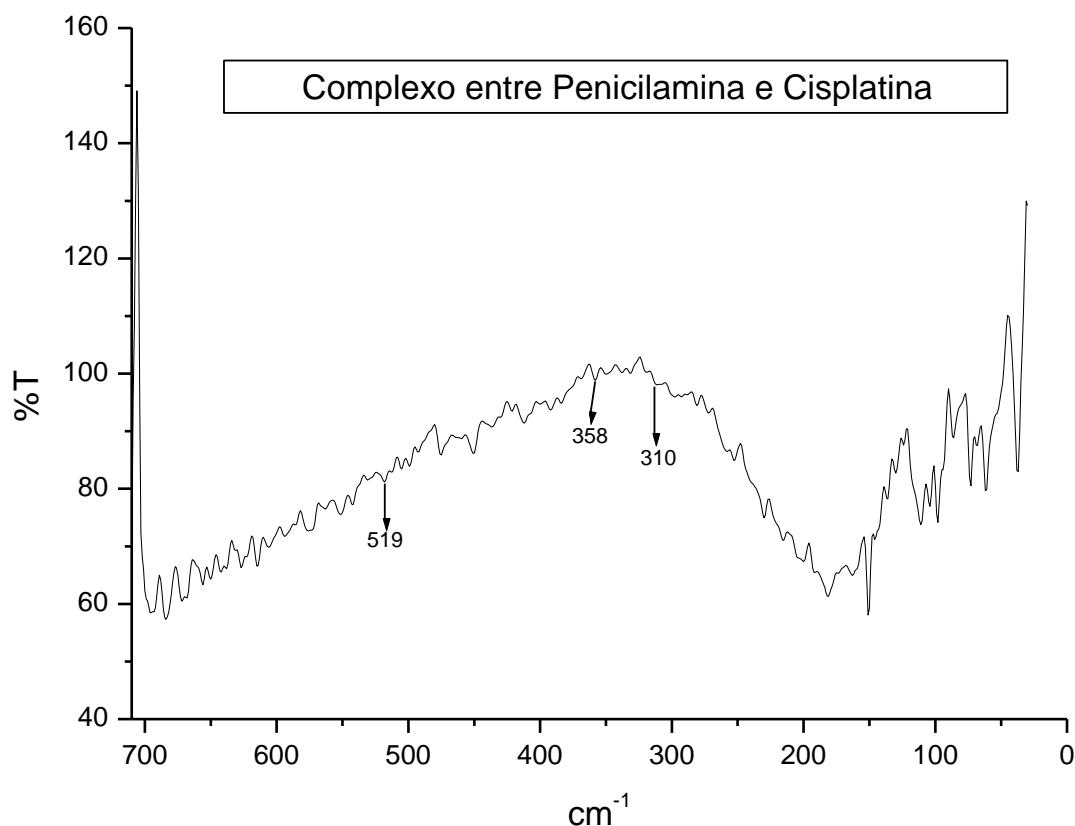


Figura 28: Espectro de infravermelho para o composto de cisplatina e penicilamina obtido com pastilha de polietileno

### 8.3. Curvas das segundas derivadas dos espectros de infravermelho comparadas com os espectros originais

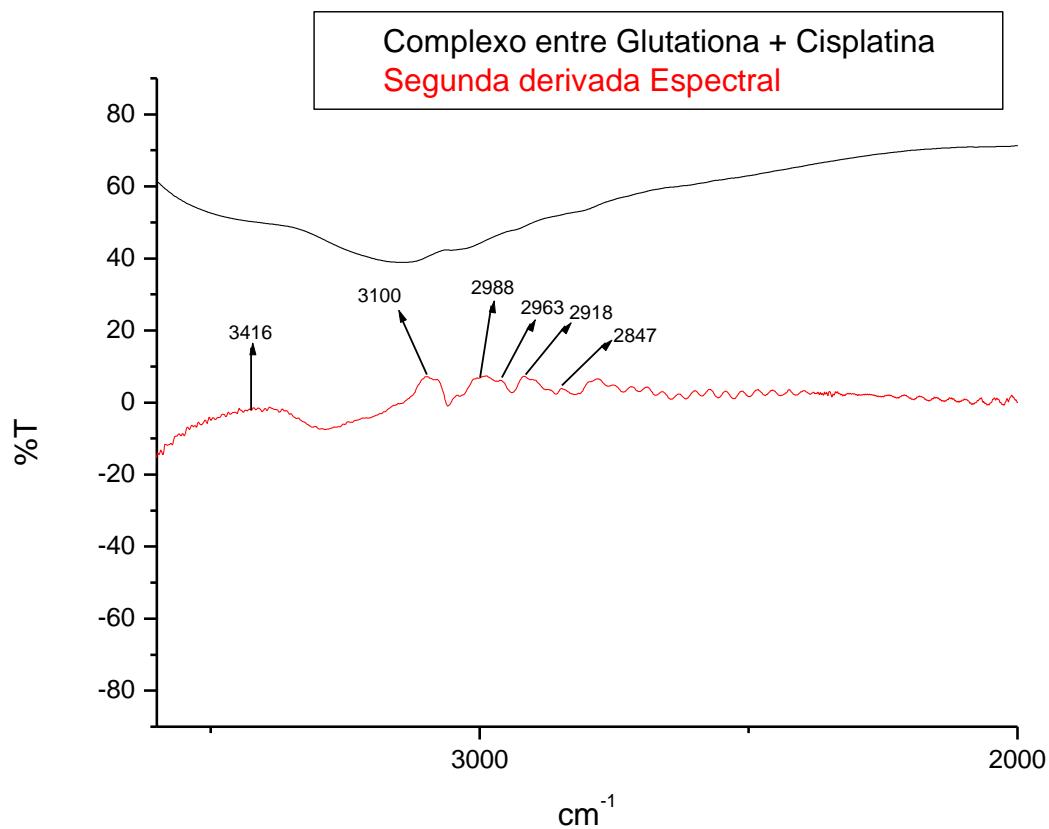


Figura 29: Segunda derivada do espectro de infravermelho do composto de glutationa e cisplatina comparada com o espectro original

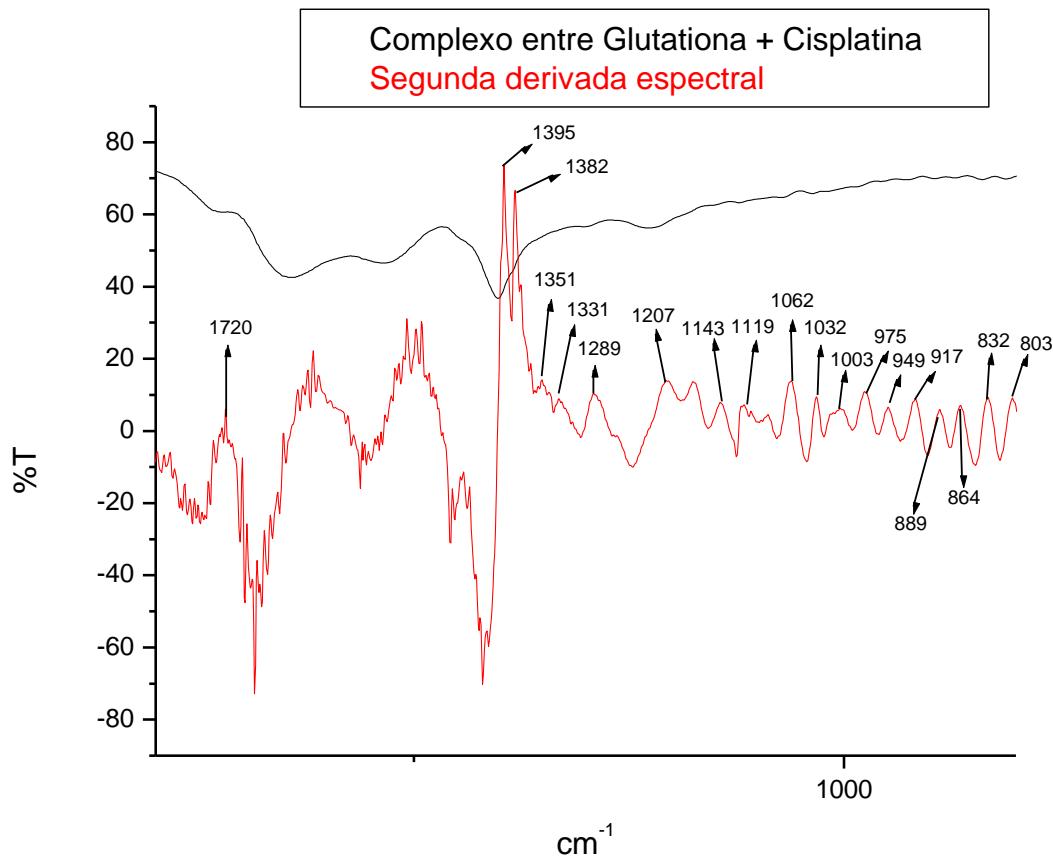


Figura 30: Segunda derivada do espectro de infravermelho do composto de glutationa e cisplatina comparada com o espectro original

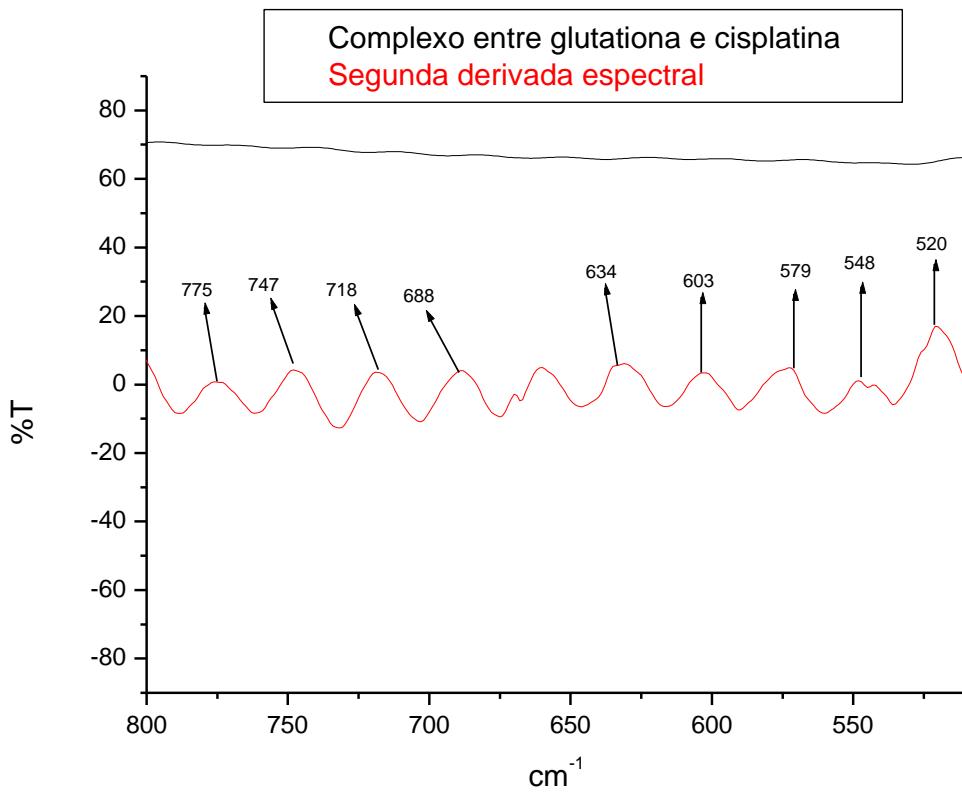


Figura 31: Segunda derivada do espectro de infravermelho do composto de glutationa e cisplatina comparada com o espectro original

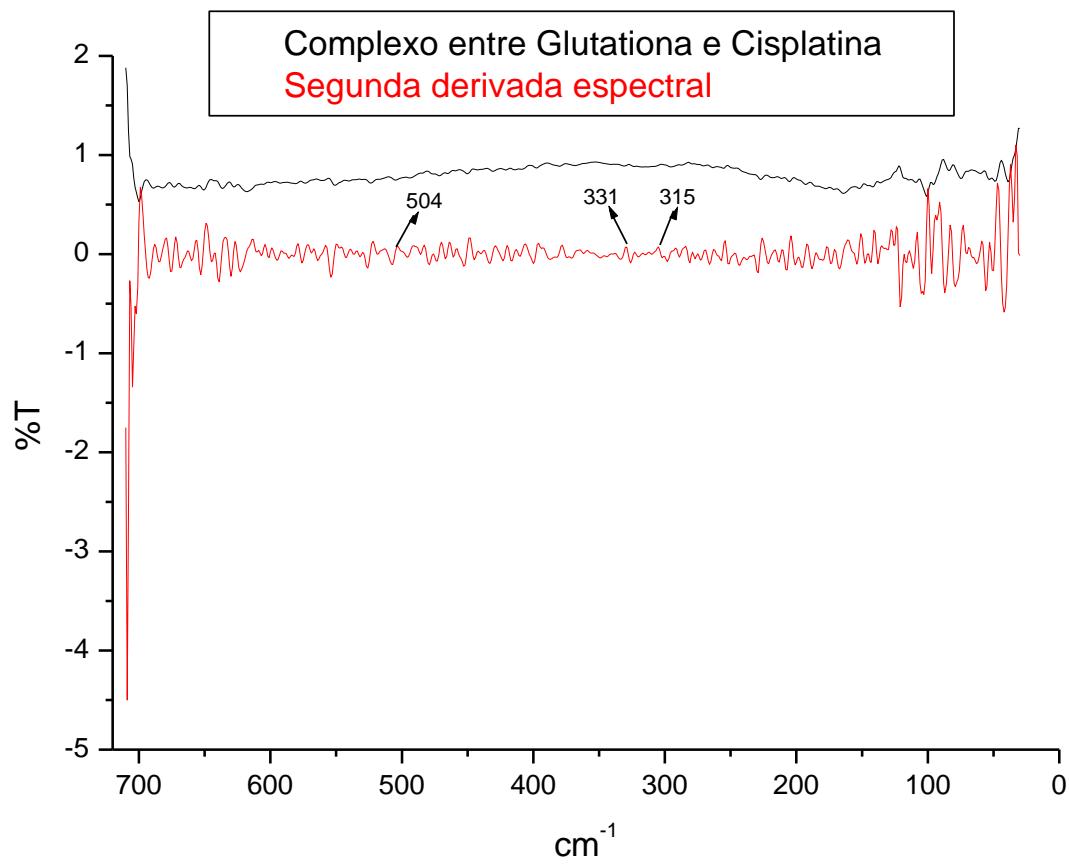


Figura 32: Segunda derivada do espectro de infravermelho do composto de glutationa e cisplatina comparada com o espectro original

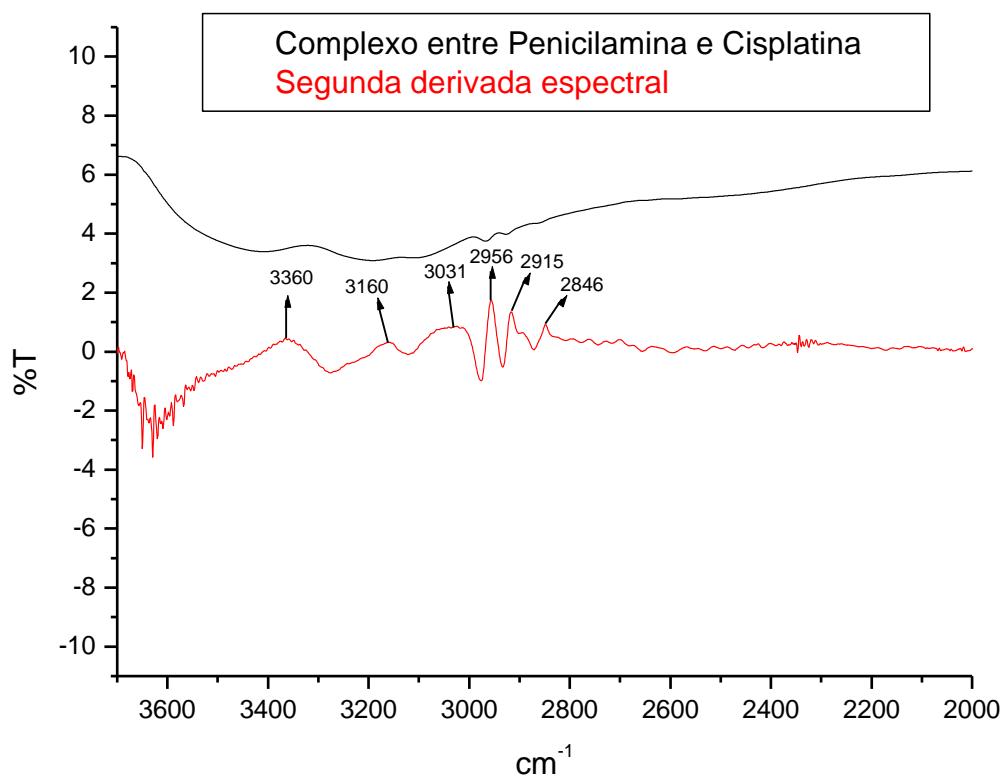


Figura 33: Segunda derivada do espectro de infravermelho do composto de penicilamina e cisplatina comparada com o espectro original

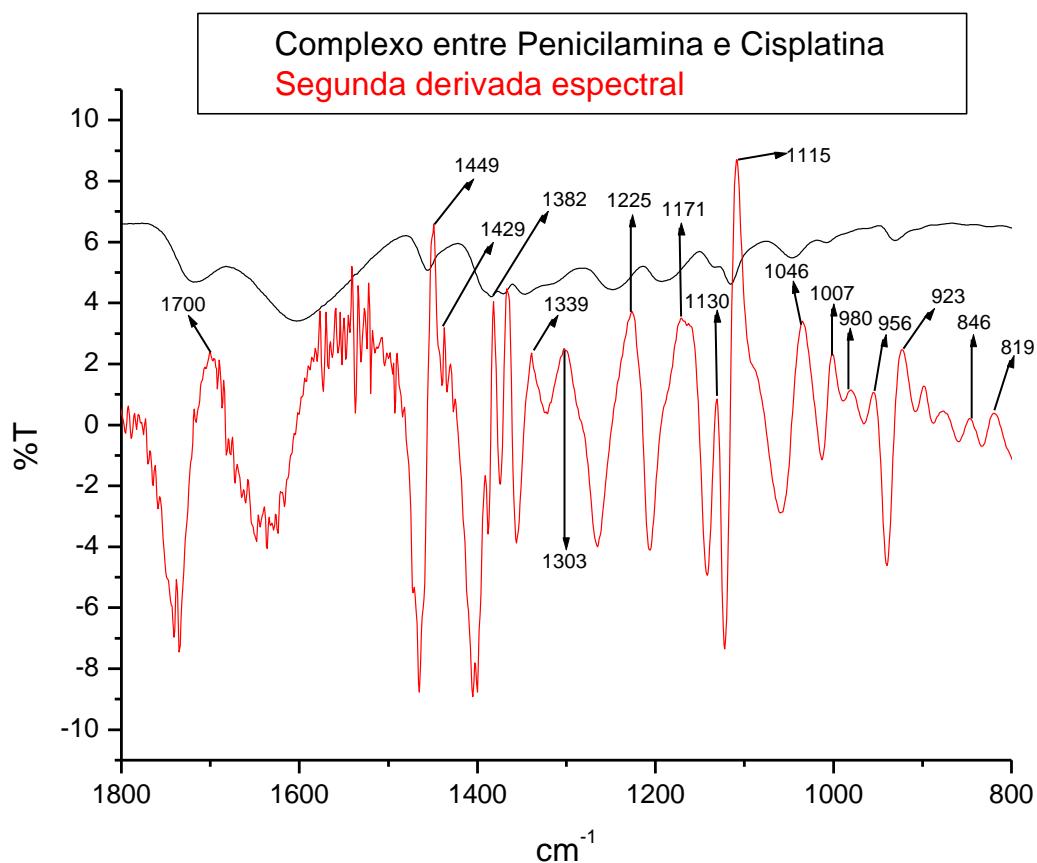


Figura 34: Segunda derivada do espectro de infravermelho do composto de penicilamina e cisplatina comparada com o espectro original

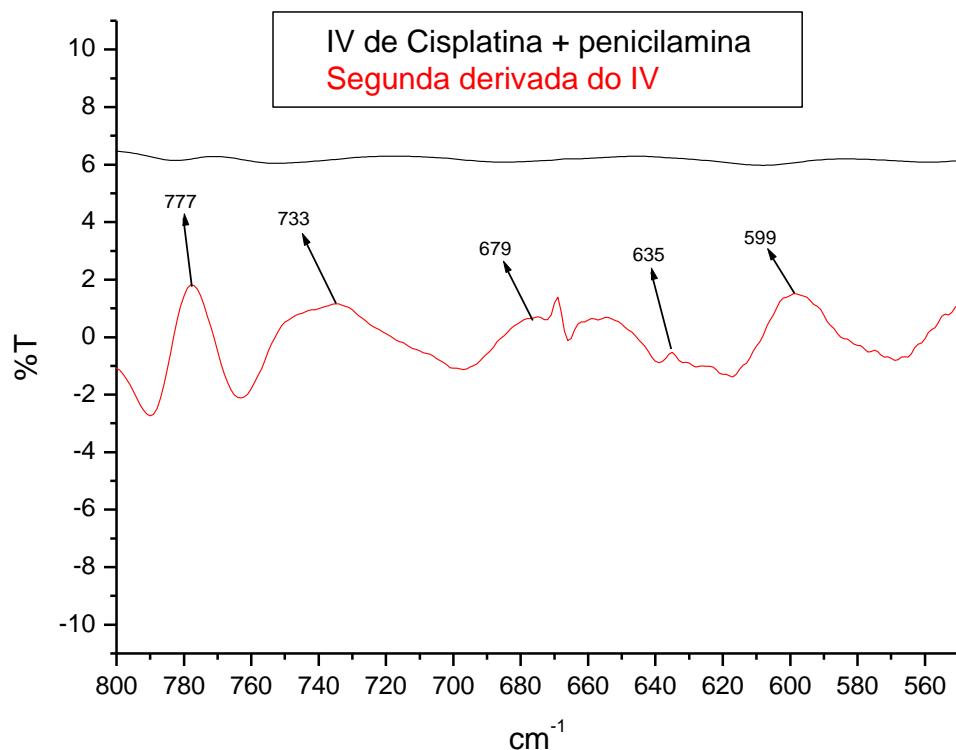


Figura 35: Segunda derivada do espectro de infravermelho do composto de penicilamina e cisplatina comparada com o espectro original

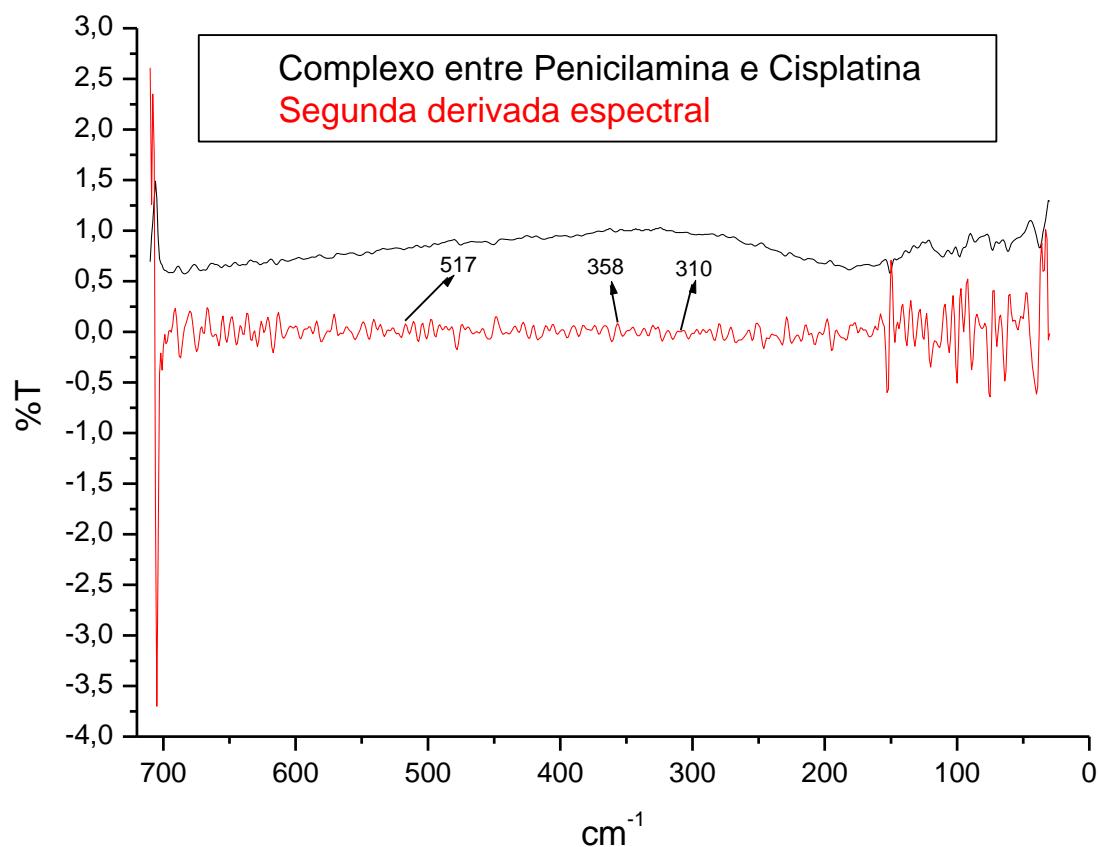


Figura 36: Segunda derivada do espectro de infravermelho do composto de penicilamina e cisplatina comparada com o espectro original

#### 8.4. Curvas dos espectros de deconvolução de bandas comparadas com os espectros no infravermelho

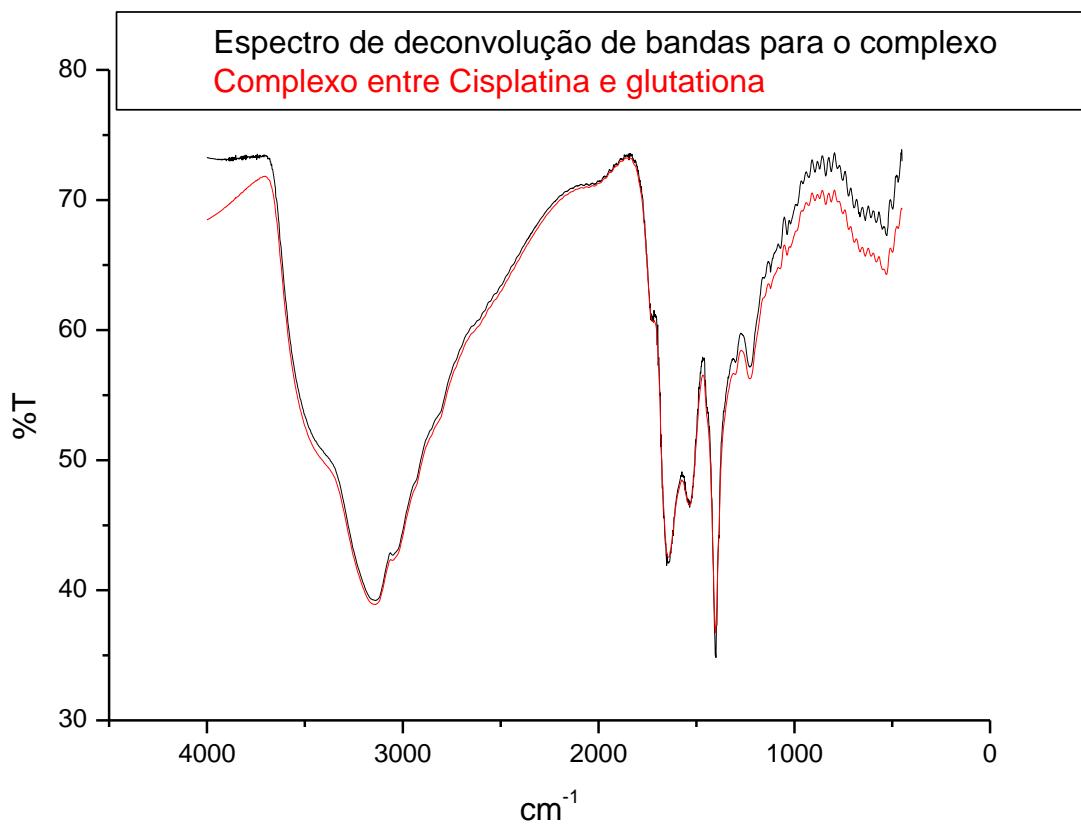


Figura 37: Espectro de deconvolução de bandas comparada com o espectro de infravermelho do composto entre cisplatina e glutationa

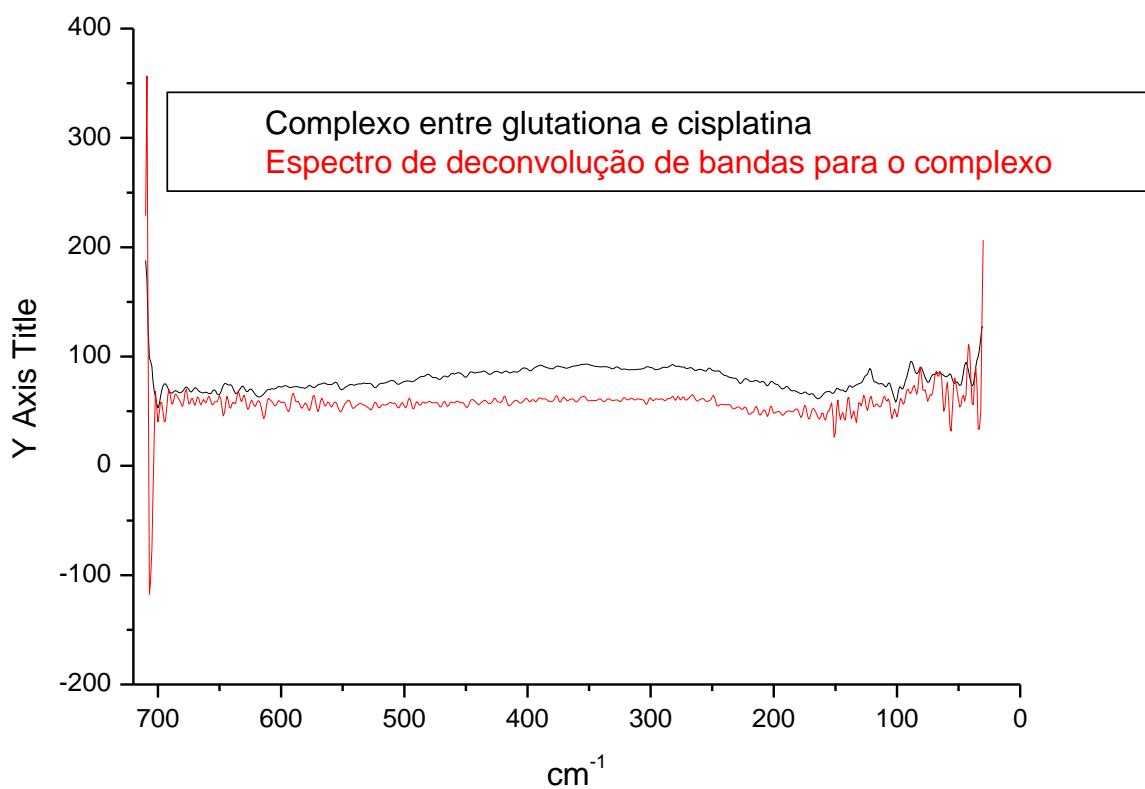


Figura 38: Espectro de deconvolução de bandas comparada com o espectro de infravermelho do composto entre cisplatina e glutationa

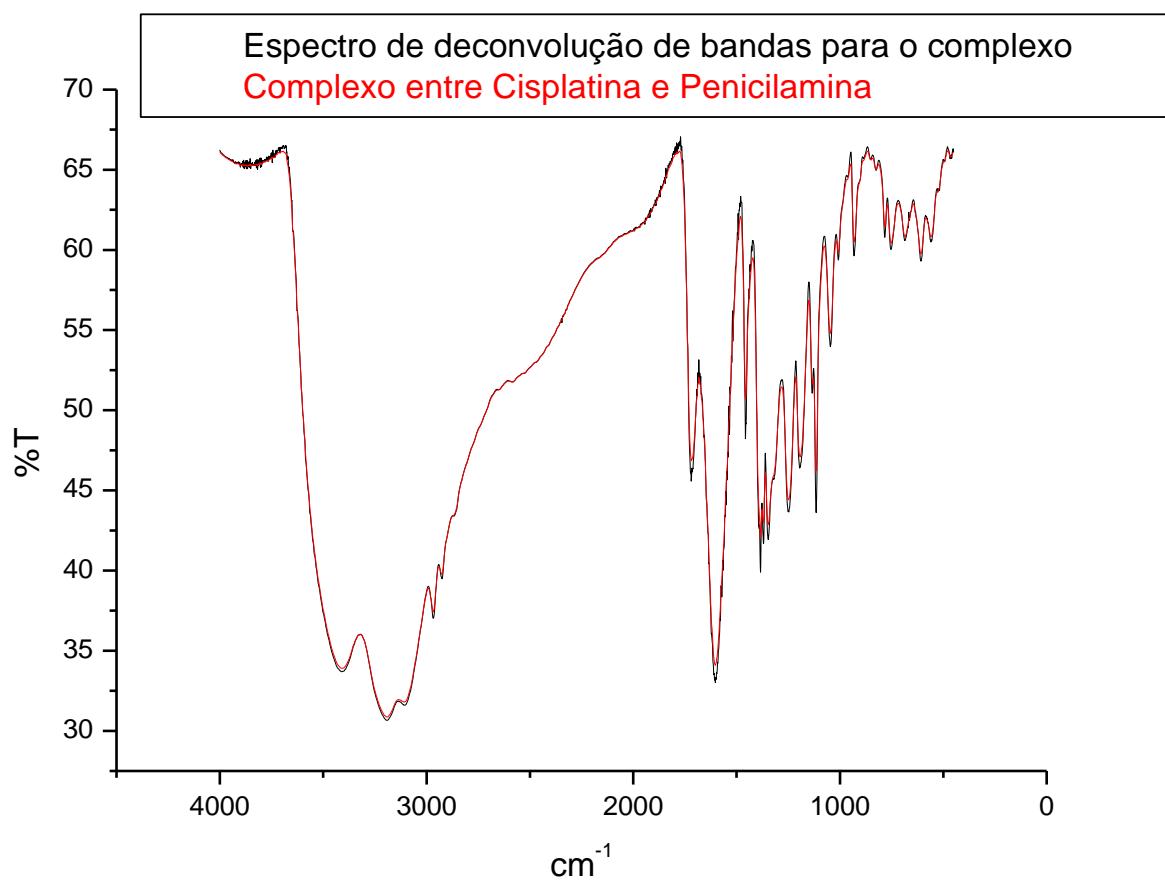


Figura 39: Espectro de deconvolução de bandas comparada com o espectro de infravermelho do composto entre cisplatina e penicilamina

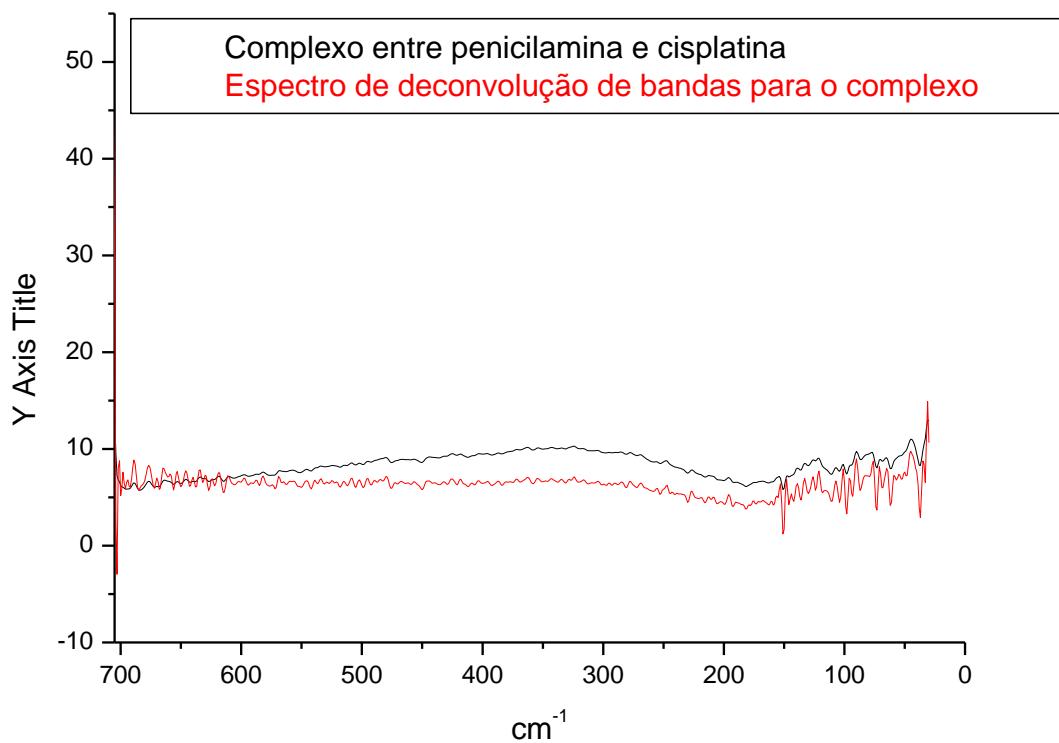


Figura 40: Espectro de deconvolução de bandas comparada com o espectro de infravermelho do composto entre cisplatina e penicilamina

### 8.5. Espectros Raman

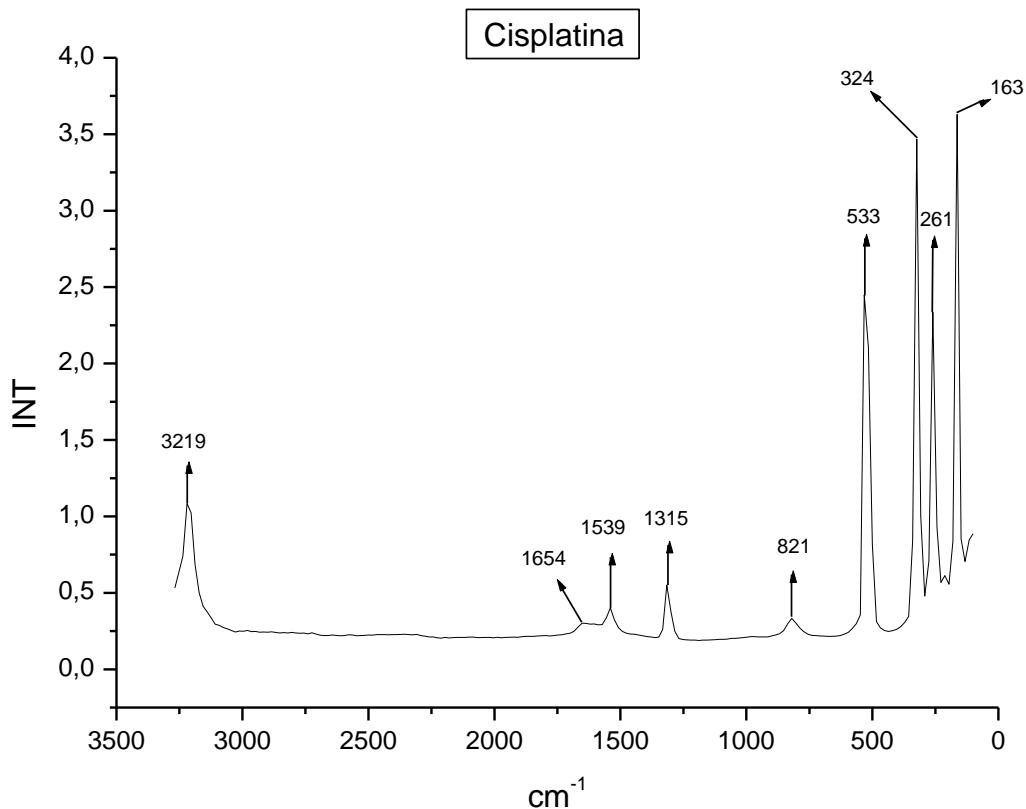


Figura 41: Espectro de Raman para a cisplatina

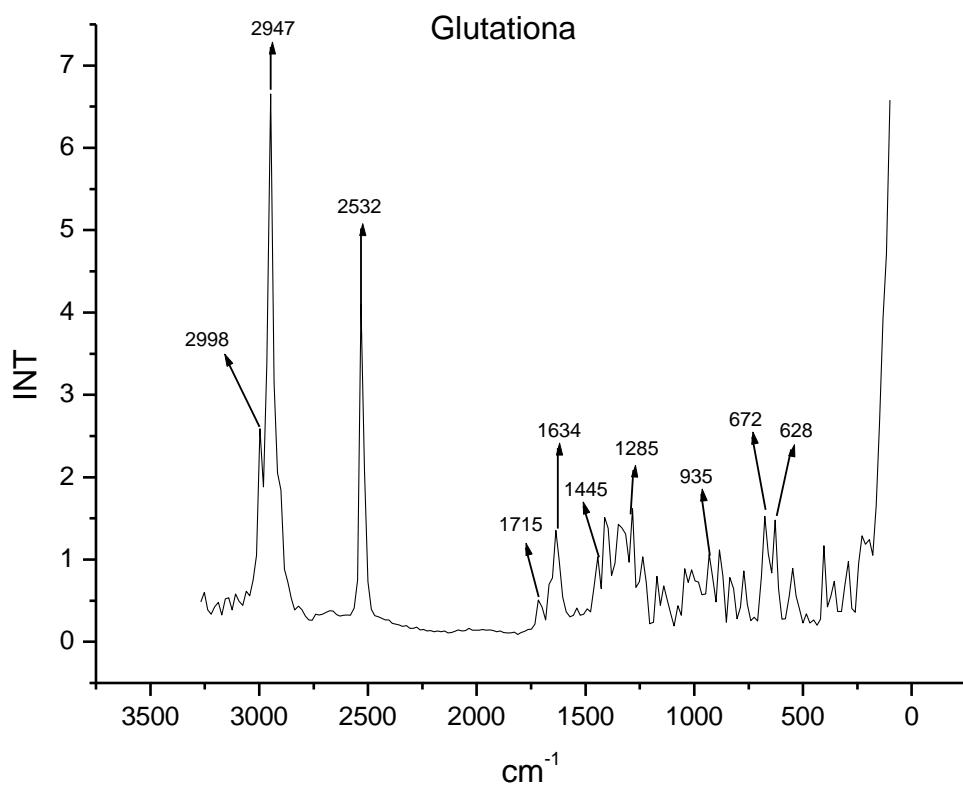


Figura 42: Espectro de Raman para a glutathiona

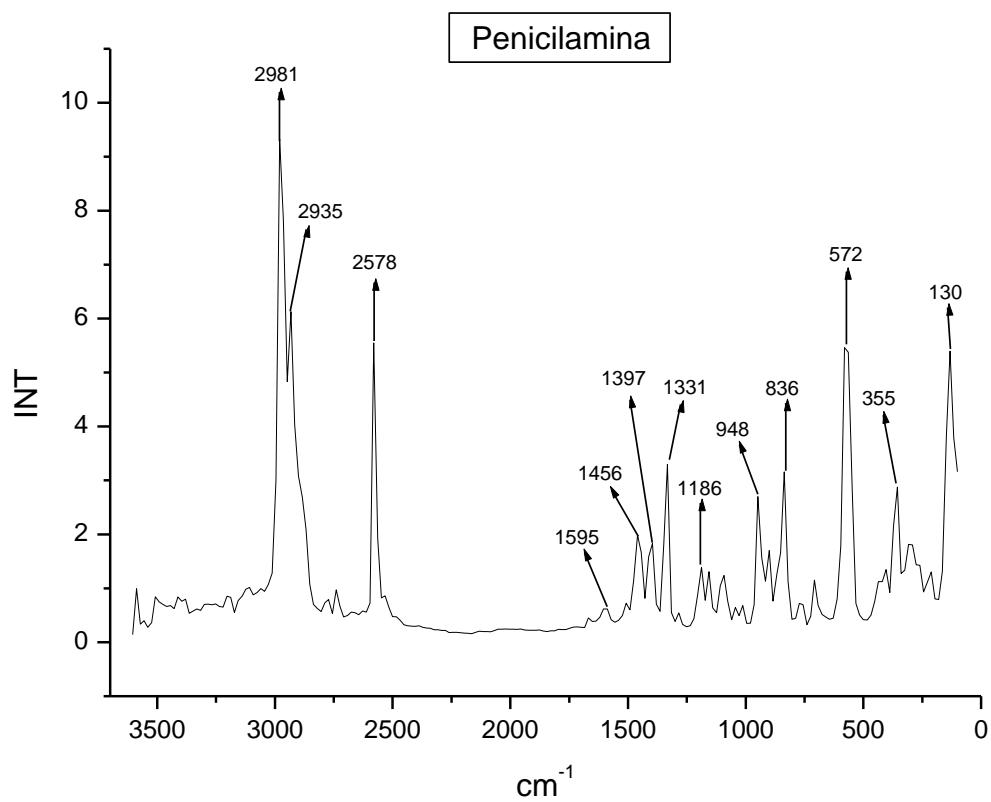


Figura 43: Espectro de Raman para a penicilamina

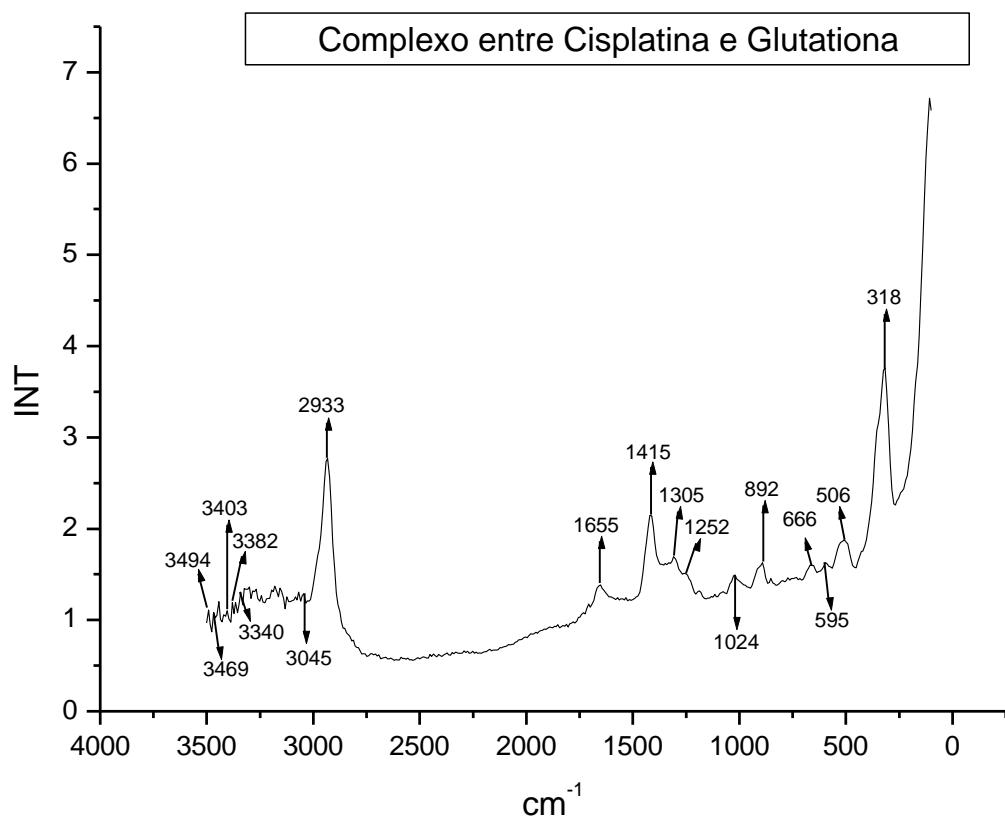


Figura 44: Espectro de Raman para o composto entre cisplatina e glutationa

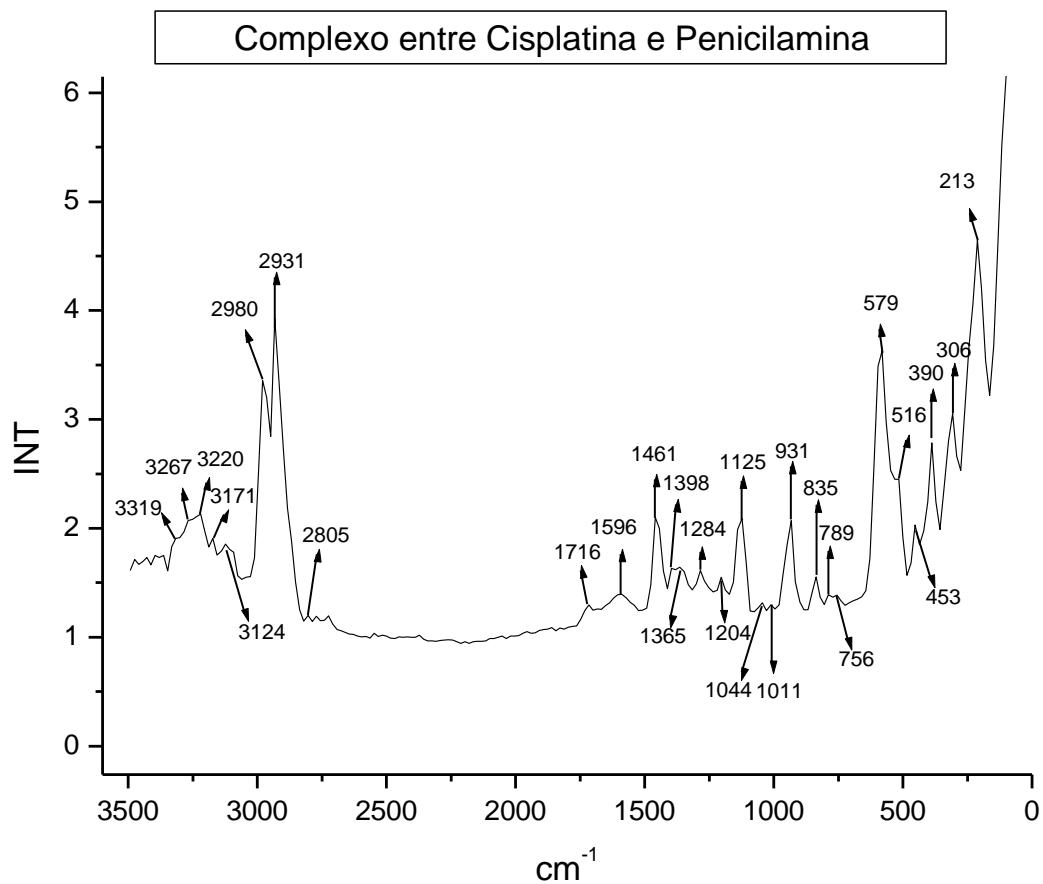


Figura 45: Espectro de Raman para o composto entre cisplatina e penicilamina

### 8.6. Espectros de infravermelho obtidos a partir dos cálculos teóricos

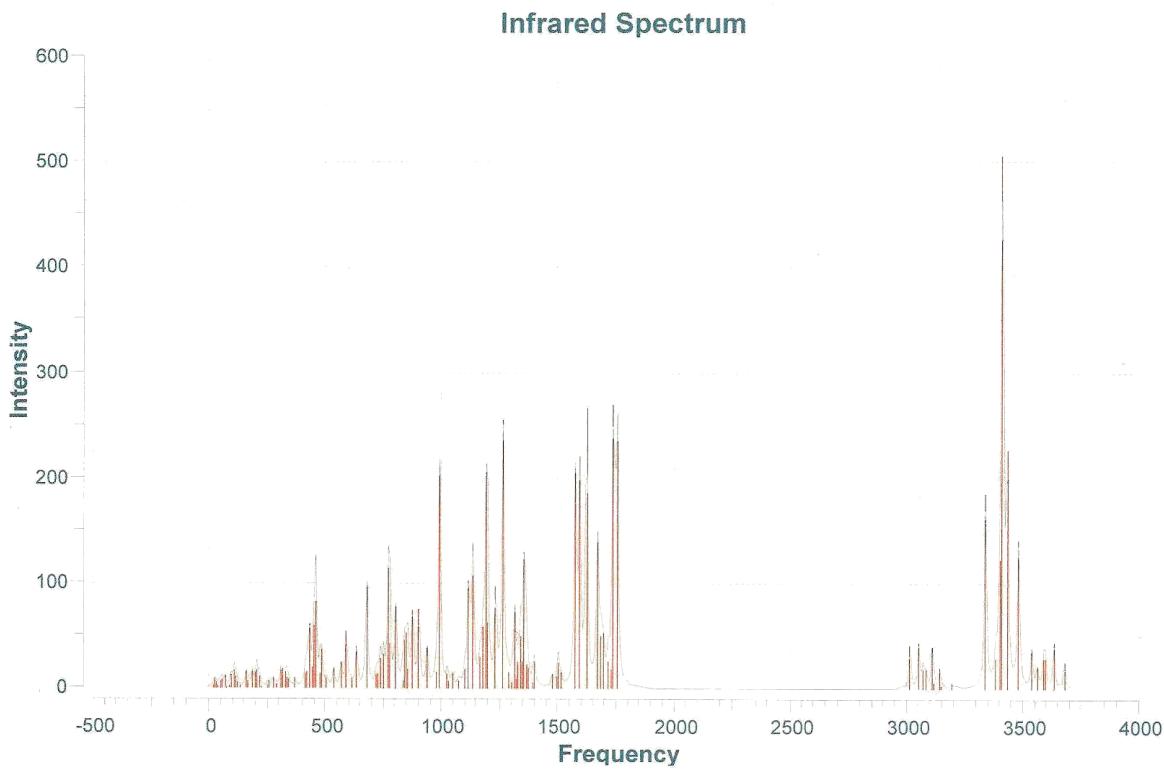


Figura 46: Espectro de infravermelho teórico para o composto entre cisplatina e glutationa

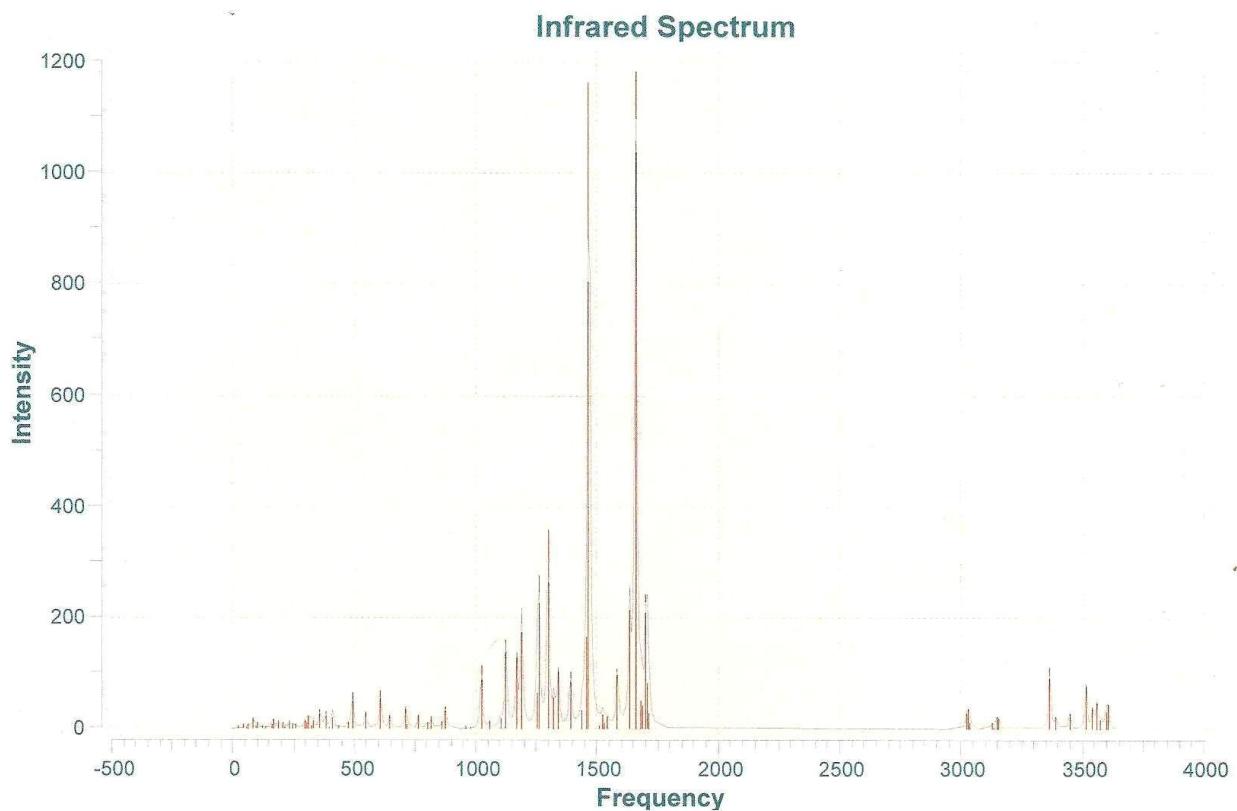


Figura 47: Espectro de infravermelho teórico para o composto entre cisplatina e penicilamina